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DICTIONARY FILE UPDATES: 6 JUL 2004 HIGHEST RN 705249-96-3

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

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<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 16:40:08 ON 07 JUL 2004
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FILE COVERS 1907 - 7 Jul 2004 VOL 141 ISS 2
FILE LAST UPDATED: 6 Jul 2004 (20040706/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> D QUE

L3 STR

Si~O~C
1 2 3

C=C
4 5

*100,277 structures from
query*

NODE ATTRIBUTES:
NSPEC IS RC AT 3
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L5 100277 SEA FILE=REGISTRY SSS FUL L3
L6 44035 SEA FILE=HCAPLUS ABB=ON L5
L7 2466 SEA FILE=HCAPLUS ABB=ON L6 AND (ADHESIV? OR CAULK? OR
SEALANT?)
L8 729 SEA FILE=HCAPLUS ABB=ON L7 AND (AQ OR AQUEOUS OR WATER? OR
H2O)
L10 6620 SEA FILE=HCAPLUS ABB=ON L6 AND COATING?
L11 2995 SEA FILE=HCAPLUS ABB=ON L10 AND (AQ OR AQUEOUS OR WATER? OR
H2O)
L13 1894 SEA FILE=HCAPLUS ABB=ON (L8 OR L11) AND COMPOSITION?
L14 4 SEA FILE=HCAPLUS ABB=ON L13 AND VOLAT?(2A)BASE#
L15 578 SEA FILE=HCAPLUS ABB=ON L13 AND (POLYMER? OR PLASTIC?)/SC,SX
L16 9 SEA FILE=HCAPLUS ABB=ON L15 AND NH4OH
L17 2 SEA FILE=HCAPLUS ABB=ON L15 AND ?SILYL?(2A)?ACETAL?
L18 1 SEA FILE=HCAPLUS ABB=ON L15 AND REVERS?(3A)PROTECT?
L20 7 SEA FILE=HCAPLUS ABB=ON L15 AND ?ACETAL?
L21 17 SEA FILE=HCAPLUS ABB=ON L14 OR L16 OR L17 OR L18 OR L20
L22 2 SEA FILE=HCAPLUS ABB=ON L15 AND ?AMMONIUM?(3A)HYDROX?
L23 1 SEA FILE=REGISTRY ABB=ON AMMONIUM HYDROXIDE/CN
L24 13916 SEA FILE=HCAPLUS ABB=ON L23
L25 1 SEA FILE=HCAPLUS ABB=ON L15 AND L24
L26 18 SEA FILE=HCAPLUS ABB=ON L21 OR L22 OR L25

=> D ALL L26 HITSTR 1-18

*18 CA references with
utility*

L26 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:585286 HCAPLUS
DN 139:134642
ED Entered STN: 30 Jul 2003
TI **Water-thinned adhesive compositions** and
manufacture method thereof
IN Shiraga, Jun; Daichi, Yasuo; Tanaka, Yoshimasa; Tamaki, Yoshifumi
PA Dainippon Ink and Chemicals, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DT Patent

LA Japanese
 IC ICM C09J201-02
 ICS C09J201-08
 CC 38-3 (Plastics Fabrication and Uses)
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 2003213244 | A2 | 20030730 | JP 2002-19993 | 20020129 |
| PRAI | JP 2002-19993 | | 20020129 | | |

AB The **adhesive** compns., having low viscosity, high solids content, and good **water** resistance, contain polymer particles (average diameter 300-2000 nm, acid value 5-50) dispersed in **aqueous** media, wherein the compns. have gel fraction 25-80% and are capable of forming a film with Tg below -25°. The above polymer particles comprise carboxy-containing polymers and polymers bearing crosslinkable groups. Thus, a copolymer of 2-ethylhexyl acrylate (I), methacrylic acid, and Me methacrylate (II) was prepared, mixed with a copolymer of I, II, and glycidyl methacrylate, and neutralized with an **aqueous NH4OH** solution to give an **aqueous** dispersion of polymer particles (solids content 60.5%, viscosity 230 mPa-s, average diameter 770 nm).

ST high solid **water** thinned acrylic **adhesive**; methacrylic acid acrylic polymer **water** resistance **adhesive**; **water** thinned low viscosity acrylic resin **adhesive**

IT **Adhesives**

(sheets; **water**-thinned **adhesives** with low viscosity and good **water** resistance)

IT **Adhesives**

(**water**-resistant; **water**-thinned **adhesives** with low viscosity and good **water** resistance)

IT **Adhesives**

(**water**-thinned; **water**-thinned **adhesives** with low viscosity and good **water** resistance)

IT 37001-63-1P, 2-Ethylhexyl acrylate-methacrylic acid-methyl methacrylate copolymer ammonium salt 61891-49-4P, 2-Ethylhexyl acrylate-methacrylic acid copolymer, ammonium salt 138178-41-3P, 2-Ethylhexyl acrylate-glycidyl methacrylate-methacrylic acid-methyl methacrylate copolymer, ammonium salt **569344-45-2P**, Cyclohexyl methacrylate-2-ethylhexyl acrylate-methacrylic acid-γ-methacryloyloxypropyltrimethoxysilane-methyl methacrylate copolymer ammonium salt **569344-47-4P**, Cyclohexyl methacrylate-2-ethylhexyl acrylate-glycidyl methacrylate-methacrylic acid-γ-methacryloyloxypropyltrimethoxysilane copolymer ammonium salt **569344-48-5P**, Cyclohexyl methacrylate-2-ethylhexyl acrylate-methacrylic acid copolymer ammonium salt

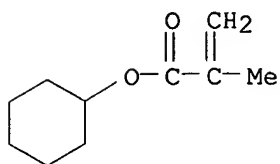
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**water**-thinned **adhesives** with low viscosity and good **water** resistance)

IT 40481-57-0P, 2-Ethylhexyl acrylate-glycidyl methacrylate-methyl methacrylate copolymer **569344-42-9P**, Cyclohexyl methacrylate-2-ethylhexyl acrylate-γ-methacryloyloxypropyltrimethoxy silane-methyl methacrylate copolymer **569344-43-0P**, Cyclohexyl methacrylate-2-ethylhexyl acrylate-glycidyl methacrylate-γ-methacryloyloxypropyltrimethoxysilane copolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

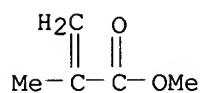
(**water**-thinned **adhesives** with low viscosity and good **water** resistance)

IT **569344-45-2P**, Cyclohexyl methacrylate-2-ethylhexyl



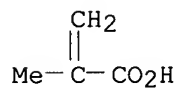
CM 5

CRN 80-62-6
CMF C5 H8 O2



CM 6

CRN 79-41-4
CMF C4 H6 O2



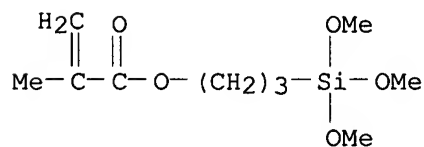
RN 569344-47-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with cyclohexyl 2-methyl-2-propenoate, 2-ethylhexyl 2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 569344-46-3
CMF (C11 H20 O2 . C10 H20 O5 Si . C10 H16 O2 . C7 H10 O3 . C4 H6 O2)x
CCI PMS

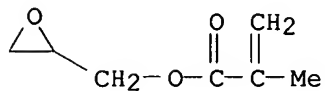
CM 2

CRN 2530-85-0
CMF C10 H20 O5 Si



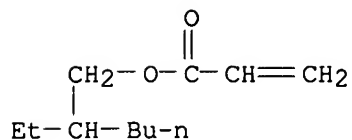
CM 3

CRN 106-91-2
CMF C7 H10 O3



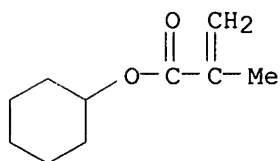
CM 4

CRN 103-11-7
CMF C11 H20 O2



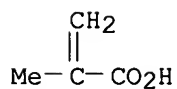
CM 5

CRN 101-43-9
CMF C10 H16 O2

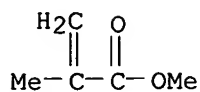


CM 6

CRN 79-41-4
CMF C4 H6 O2



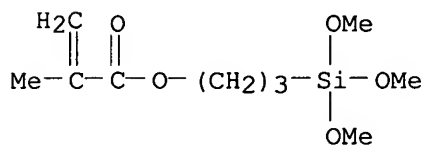
IT **569344-42-9P**, Cyclohexyl methacrylate-2-ethylhexyl acrylate- γ -methacryloyloxypropyltrimethoxysilane-methyl methacrylate copolymer **569344-43-0P**, Cyclohexyl methacrylate-2-ethylhexyl acrylate-glycidyl methacrylate- γ -methacryloyloxypropyltrimethoxysilane copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)



RN 569344-43-0 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with 2-ethylhexyl
 2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and
 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

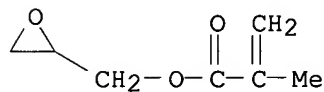
CM 1

CRN 2530-85-0
 CMF C10 H20 O5 Si



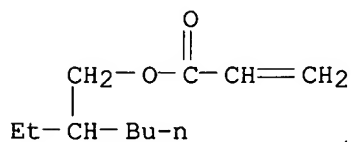
CM 2

CRN 106-91-2
 CMF C7 H10 O3



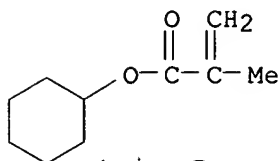
CM 3

CRN 103-11-7
 CMF C11 H20 O2



CM 4

CRN 101-43-9
 CMF C10 H16 O2



L26 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:570990 HCAPLUS
 DN 139:118790
 ED Entered STN: 25 Jul 2003
 TI Reversibly protected silanes for incorporation into curable
coatings, silane preparation, and **aqueous** polymer
composition
 IN Bowen, Daniel Edward, III; Castner, Eric Sean
 PA The Goodyear Tire & Rubber Company, USA
 SO PCT Int. Appl., 236 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C07F007-04
 ICS C07F007-18; C08F006-00; C08K005-00
 CC 42-3 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 29

applicants

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| PI WO 2003059918 | A1 | 20030724 | WO 2002-US35357 | 20021104 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |

PRAI US 2002-346426P P 20020107

OS MARPAT 139:118790

AB Hydroxy-silane functional groups are reversibly protected by
 acid-cleavable protecting groups. The development of reversible
 protecting groups greatly enhances the current utility of silanes while
 introducing further novel applications. For instance, reversibly
 protected silanes are of particular value in applications where room
 temperature

cure and/or adhesion is of value, such as **coatings**, high resolution
 imaging, **caulks**, **adhesives**, **sealants**,
 gaskets, and silicones. Reversibly protected silanes can also be
 beneficially used in reticulating agents, sizing agents, tires, and
 release **coatings**. The reversibly protected silane can be
 incorporated into a **coating** resin by polymerizing a monomer containing
 the reversibly protected silane into the resin or by post-addition into the
coating formulation. The reversibly protected silane remains
 protected under basic conditions, such as in a **coating**

formulation that contains a **volatile base**, for instance NH₄OH. However, deprotection occurs under mildly acidic conditions. As a **coating** formulation containing a **volatile base** dries the **volatile base** evaps. and deprotection occurs, which allows for controlled room temperature crosslinking to occur with hydroxy-functionalized polymers. A silyl-acetal compound consists of a silane having 3 or 4 acetal moieties, such as 3-methacryloxypropylsilane triacetal with tetrahydropyran-2-ol (monomer preparation given).

ST silyl acetal prepn polymn **coating** use

IT **Adhesives**

Caulking compositions

Sealing compositions

(reversibly protected silanes for incorporation into curable)

IT Silicone rubber, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(reversibly protected silanes for incorporation into curable)

IT **Coating materials**

(room-temperature-curable, **aqueous**; reversibly protected silanes for incorporation into curable **coatings**)

IT **Coating materials**

(solvent-resistant; reversibly protected silanes for incorporation into curable **coatings**)

IT **565198-42-7P**

RL: IMF (Industrial manufacture); PREP (Preparation)

(latex **coating** binder2; reversibly protected silanes for incorporation into curable **coatings**)

IT 694-54-2, Tetrahydropyran-2-ol

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with alkoxysilane; reversibly protected silanes for incorporation into curable **coatings**)

IT 78-10-4, Tetraethylorthosilicate **2530-85-0**, 3-

Methacryloxypropyltrimethoxysilane **5507-44-8**,

Vinylmethyldiethoxysilane 71808-65-6, Octadecyldimethylmethoxysilane

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with tetrahydropyran-2-ol; reversibly protected silanes for incorporation into curable **coatings**)

IT 544715-95-9P **544715-96-0P 544715-97-1P 544715-98-2P**

RL: IMF (Industrial manufacture); PREP (Preparation)

(reversibly protected silanes for incorporation into curable **coatings**)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Baumann, J; US 4369264 A 1983 HCAPLUS

(2) Ender, H; US 3287160 A 1966 HCAPLUS

(3) Ender, H; US 3287291 A 1966 HCAPLUS

(4) Nakamura, A; US 5973067 A 1999 HCAPLUS

(5) Rhodia Chimie; WO 0188049 A 2001 HCAPLUS

(6) Semprini, L; US 6472198 B1 2002 HCAPLUS

IT **565198-42-7P**

RL: IMF (Industrial manufacture); PREP (Preparation)

(latex **coating** binder2; reversibly protected silanes for incorporation into curable **coatings**)

RN 565198-42-7 HCAPLUS

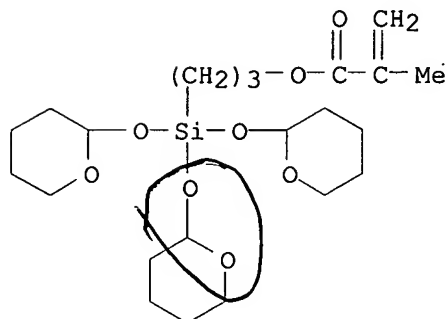
CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, ethenylbenzene and 3-[tris[(tetrahydro-2H-pyran-2-yl)oxy]silyl]propyl 2-methyl-2-propenoate, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 565198-41-6
 CMF (C22 H38 O8 Si . C8 H8 . C7 H12 O2 . C4 H6 O2)x
 CCI PMS

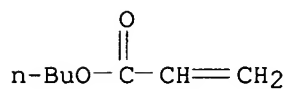
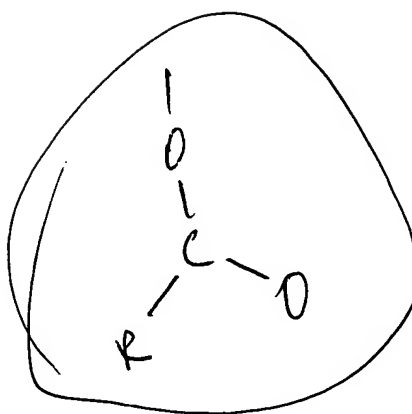
CM 2

CRN 544715-97-1
 CMF C22 H38 O8 Si



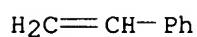
CM 3

CRN 141-32-2
 CMF C7 H12 O2



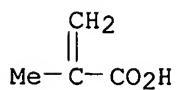
CM 4

CRN 100-42-5
 CMF C8 H8

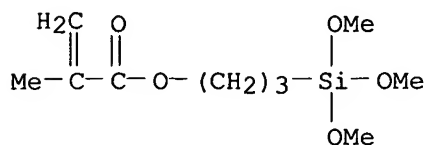


CM 5

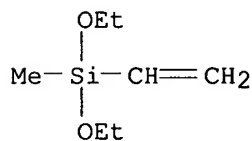
CRN 79-41-4
 CMF C4 H6 O2



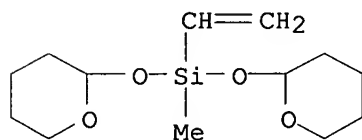
IT 2530-85-0, 3-Methacryloxypropyltrimethoxysilane 5507-44-8
 , Vinylmethyldiethoxysilane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with tetrahydropyran-2-ol; reversibly protected silanes for
 incorporation into curable **coatings**)
 RN 2530-85-0 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester (9CI) (CA
 INDEX NAME)



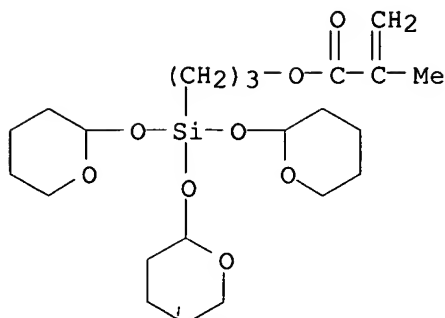
RN 5507-44-8 HCAPLUS
 CN Silane, ethenyldiethoxymethyl- (9CI) (CA INDEX NAME)



IT 544715-96-0P 544715-97-1P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (reversibly protected silanes for incorporation into curable
coatings)
 RN 544715-96-0 HCAPLUS
 CN Silane, ethenylmethylbis[(tetrahydro-2H-pyran-2-yl)oxy]- (9CI) (CA INDEX
 NAME)



RN 544715-97-1 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-[tris[(tetrahydro-2H-pyran-2-yl)oxy]silyl]propyl ester (9CI) (CA INDEX NAME)



L26 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:479053 HCAPLUS

DN 139:53970

ED Entered STN: 24 Jun 2003

TI **Water**-dispersed pressure-sensitive **adhesive** compositions, pressure-sensitive **adhesive** sheets, and rubber foam-based **adhesive** sheets using them

IN Okada, Kenichi; Naito, Tomoya; Umeda, Michio

PA Nitto Denko Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09J133-06

ICS C08F220-12; C09J007-02; C09J133-02; C09J143-04; C08F230-08

CC 38-3 (**Plastics** Fabrication and Uses)

Section cross-reference(s): 39

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 2003176469 | A2 | 20030624 | JP 2001-378090 | 20011212 |
| PRAI | JP 2001-378090 | | 20011212 | | |

AB The comps. contain phenolic tackifiers added to **aqueous** dispersions containing polymers prepared by copolymn. of monomer mixts. containing alkyl (meth)acrylates as major components and silane monomers. Thus, Bu acrylate 70, 2-ethylhexyl acrylate 30, acrylic acid 3, and KBM 503 (3-methacryloyloxypropyltrimethoxysilane) 0.05 part were emulsion-polymerized in the presence of dodecanethiol and 2,2'-azobis[2-(5-methyl-2-imidazolin-2-yl)propane].2HCl, the reaction mixture was adjusted to pH 8.0 with **NH4OH** and mixed with 0.06 part AY 43-210MC (n-decyltrimethoxysilane) to give an **aqueous** dispersion, 100 parts (as solids) of which was mixed with 30 parts (as solids) Tamanol E 100 (rosin phenolic resin) and applied on release sheets and bonded to both sides of PR 14 (nonwoven fabric) to give a pressure-sensitive **adhesive** sheet. The **adhesive** sheet was attached to an EPDM rubber foam sheet and bonded to a stainless steel sheet to give a test piece showing **adhesive** strength 12 and 12 N/20 mm initially and after 7-day storage at 60° and relative humidity 90%, resp.

ST polyacrylate silane tackifier pressure sensitive **adhesive**; rubber foam sheet **adhesive** polyacrylate tackifier; phenolic tackifier silane polymethacrylate **adhesive** sheet

IT Silsesquioxanes

RL: IMF (Industrial manufacture); TEM (Technical or engineered material)

- use); PREP (Preparation); USES (Uses)
(acrylic; **water**-dispersed pressure-sensitive **adhesive** compns. containing silane-containing poly(meth)acrylates and phenolic tackifiers and their sheets with good adhesion to rubber foams)
- IT EPDM rubber
Rubber, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(foams; **water**-dispersed pressure-sensitive **adhesive** compns. containing silane-containing poly(meth)acrylates and phenolic tackifiers and their sheets with good adhesion to rubber foams)
- IT Rosin
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(polymers with phenols, tackifiers; **water**-dispersed pressure-sensitive **adhesive** compns. containing silane-containing poly(meth)acrylates and phenolic tackifiers and their sheets with good adhesion to rubber foams)
- IT Phenols, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(polymers with rosin or terpenes, tackifiers; **water**-dispersed pressure-sensitive **adhesive** compns. containing silane-containing poly(meth)acrylates and phenolic tackifiers and their sheets with good adhesion to rubber foams)
- IT Terpenes, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(polymers, with phenols, tackifiers; **water**-dispersed pressure-sensitive **adhesive** compns. containing silane-containing poly(meth)acrylates and phenolic tackifiers and their sheets with good adhesion to rubber foams)
- IT **Adhesives**
(pressure-sensitive; **water**-dispersed pressure-sensitive **adhesive** compns. containing silane-containing poly(meth)acrylates and phenolic tackifiers and their sheets with good adhesion to rubber foams)
- IT **Adhesives**
(sheets; **water**-dispersed pressure-sensitive **adhesive** compns. containing silane-containing poly(meth)acrylates and phenolic tackifiers and their sheets with good adhesion to rubber foams)
- IT Tackifiers
(**water**-dispersed pressure-sensitive **adhesive** compns. containing silane-containing poly(meth)acrylates and phenolic tackifiers and their sheets with good adhesion to rubber foams)
- IT 52627-29-9, Sumilite Resin PR 12603 147014-54-8, Tamanol E 100 547753-46-8, Nanolet G 1450
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(tackifier; **water**-dispersed pressure-sensitive **adhesive** compns. containing silane-containing poly(meth)acrylates and phenolic tackifiers and their sheets with good adhesion to rubber foams)
- IT 547741-85-5P, Acrylic acid-AY 43-210MC-butyl acrylate-2-ethylhexyl acrylate-KBM 503 copolymer ammonium salt
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**water**-dispersed pressure-sensitive **adhesive** compns. containing silane-containing poly(meth)acrylates and phenolic tackifiers and their sheets with good adhesion to rubber foams)

IT 547741-85-5P, Acrylic acid-AY 43-210MC-butyl acrylate-2-ethylhexyl acrylate-KBM 503 copolymer ammonium salt
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (water-dispersed pressure-sensitive adhesive
 compns. containing silane-containing poly(meth)acrylates and phenolic tackifiers and their sheets with good adhesion to rubber foams)

RN 547741-85-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with butyl 2-propenoate, decyltrimethoxysilane, 2-ethylhexyl 2-propenoate and 2-propenoic acid, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 547741-84-4

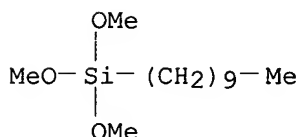
CMF (C13 H30 O3 Si . C11 H20 O2 . C10 H20 O5 Si . C7 H12 O2 . C3 H4 O2)x

CCI PMS

CM 2

CRN 5575-48-4

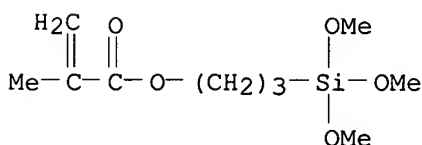
CMF C13 H30 O3 Si



CM 3

CRN 2530-85-0

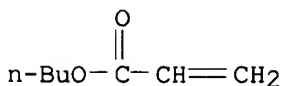
CMF C10 H20 O5 Si



CM 4

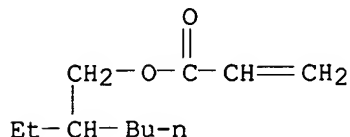
CRN 141-32-2

CMF C7 H12 O2



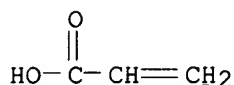
CM 5

CRN 103-11-7
CMF C11 H20 O2



CM 6

CRN 79-10-7
CMF C3 H4 O2



L26 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:473289 HCAPLUS
DN 139:53801
ED Entered STN: 20 Jun 2003
TI **Silyl-acetal** compounds, polymers, their preparation
and use
IN Bowen, Daniel Edward; Castner, Eric Sean
PA USA
SO U.S. Pat. Appl. Publ., 48 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C08L031-00
NCL 524556000; 525342000; 524261000
CC 37-6 (**Plastics** Manufacture and Processing)
Section cross-reference(s): **38**

applicants

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------|------|----------|-----------------|----------|
| PI | US 2003114581 | A1 | 20030619 | US 2002-222739 | 20020816 |
| | US 2004087803 | A1 | 20040506 | US 2003-695156 | 20031028 |
| | US 2004092650 | A1 | 20040513 | US 2003-695024 | 20031028 |
| | US 2004092651 | A1 | 20040513 | US 2003-695494 | 20031028 |
| | US 2004087693 | A1 | 20040506 | US 2003-696704 | 20031029 |
| | US 2004110894 | A1 | 20040610 | US 2003-702679 | 20031106 |
| | US 2004116712 | A1 | 20040617 | US 2003-724798 | 20031201 |
| PRAI | US 2001-312851P | P | 20010816 | | |
| | US 2001-326042P | P | 20010928 | | |
| | US 2002-222739 | A3 | 20020816 | | |

OS MARPAT 139:53801

AB **Reversible protection** of hydroxy-silane functional groups is achieved by acid cleavable protecting groups, e.g. a silane having 3 or 4 **acetal** moieties. The development of **reversible protecting groups** greatly enhances the

current utility of silanes. For instance, **reversibly protected** silanes are of particular value in applications where room temperature cure and/or adhesion is of value, such as **coatings**, high resolution imaging, **caulks**, **adhesives**, **sealants**, gaskets, and silicones. **Reversibly protected** silanes can also be beneficially used in reticulating agents, and in sizing agents, tires, and release **coatings**. The incorporation of **reversibly protected** silanes into **coating** resins is of particular value. The **reversibly protected** silane can be incorporated into the **coating** resin by polymerizing a monomer containing the **reversibly protected** silane into the resin or by post-addition into the **coating** formulation. The **reversibly protected** silane remains **protected** under basic conditions, such as in a **coating** formulation that contains a **volatile base**, for instance **NH4OH**. Deprotection occurs under mildly acidic conditions. Thus, as a **coating** formulation containing a **volatile base** dries the **volatile base** evaps. and deprotection occurs. This allows for controlled room-temperature crosslinking to occur with hydroxy-functionalized polymers.

- ST **silyl acetal** monomer latex development;
reversibly protected silane monomer; **adhesive coating** formulation **silyl acetal** compd
- IT Silicone rubber, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (incorporating **silyl-acetal**; room temperature vulcanizable **composition** containing **silyl-acetal**)
- IT **Adhesives**
Caulking compositions
Sealing compositions
 (preparation of **silyl acetal** compds. for)
- IT **Coating materials**
 (**water**-thinned; preparation of **silyl acetal** compds. for)
- IT 546101-60-4, Robond PS 94
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**adhesive**; **adhesives** containing **silyl-acetal** reticulating agent for reduced tack)
- IT **544715-97-1P** 544715-98-2P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and polymerization; preparation of **silyl acetal** compds. for)
- IT **56467-21-1P** **544715-99-3P**
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation and swelling property of film latex)
- IT 544715-95-9P **544715-96-0P**
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of **silyl acetal** compds. for)
- IT 78-10-4, Tetraethyl orthosilicate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of **silyl acetal** compds. for)
- IT 694-54-2, Tetrahydropyran-2-ol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with alkoxysilane; preparation of **silyl acetal** compds. for)
- IT **2530-85-0**, 3-Methacryloxypropyltrimethoxysilane **5507-44-8**, Vinylmethyldiethoxysilane 71808-65-6, Octadecyldimethylmethoxysilane
 RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with tetrahydropyranol; preparation of **silyl acetal** compds. for)

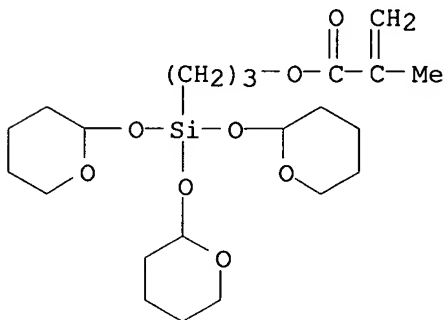
IT **544715-97-1P**

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(preparation and polymerization; preparation of **silyl acetal** compds. for)

RN 544715-97-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-[tris[(tetrahydro-2H-pyran-2-yl)oxy]silyl]propyl ester (9CI) (CA INDEX NAME)



IT **56467-21-1P 544715-99-3P**

RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation and swelling property of film latex)

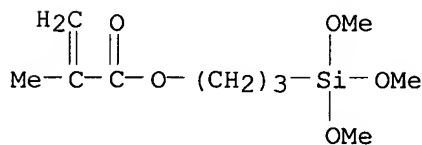
RN 56467-21-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with butyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 2530-85-0

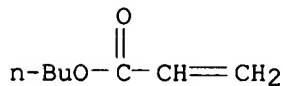
CMF C10 H20 O5 Si



CM 2

CRN 141-32-2

CMF C7 H12 O2



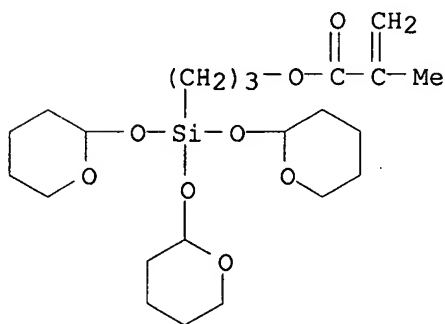
RN 544715-99-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-[tris[(tetrahydro-2H-pyran-2-yl)oxy]silyl]propyl ester, polymer with butyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 544715-97-1

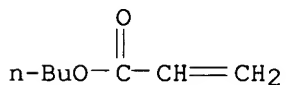
CMF C22 H38 O8 Si



CM 2

CRN 141-32-2

CMF C7 H12 O2

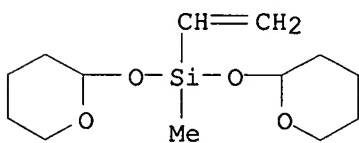


IT 544715-96-0P

RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of **silyl acetal** compds. for)

RN 544715-96-0 HCAPLUS

CN Silane, ethenylmethylbis[(tetrahydro-2H-pyran-2-yl)oxy]- (9CI) (CA INDEX NAME)

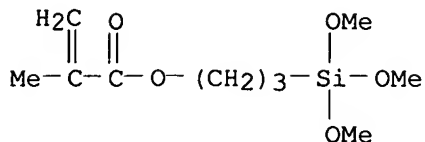


IT 2530-85-0, 3-Methacryloxypropyltrimethoxysilane 5507-44-8
, Vinylmethyldiethoxysilane

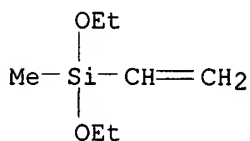
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with tetrahydropyranol; preparation of **silyl acetal** compds. for)

RN 2530-85-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester (9CI) (CA INDEX NAME)



RN 5507-44-8 HCAPLUS
 CN Silane, ethenyldiethoxymethyl- (9CI) (CA INDEX NAME)



L26 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:503400 HCAPLUS
 DN 137:63920
 ED Entered STN: 05 Jul 2002
 TI Star polymer colloidal stabilizers and their uses in emulsion polymers and replacement of surfactants
 IN Phan, Lien; Mukherjee, Apala; Farwaha, Rajeev; Thomaides, John S.
 PA National Starch and Chemical Investment Holding Corporation, USA
 SO Eur. Pat. Appl., 15 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C08F230-08
 ICS C08F220-28; C08F002-24; C09D157-00
 CC 37-2 (Plastics Manufacture and Processing)
 Section cross-reference(s): 38, 42

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | EP 1219650 | A2 | 20020703 | EP 2001-129243 | 20011211 |
| | EP 1219650 | A3 | 20021127 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | US 6420479 | B1 | 20020716 | US 2000-752897 | 20001229 |
| | CN 1362427 | A | 20020807 | CN 2001-130283 | 20011229 |
| PRAI | US 2000-752897 | A | 20001229 | | |

AB A colloid **composition** is presented which contains an amphiphilic star polymer having potentially crosslinkable sites on the polymer backbone. The potentially crosslinkable site is either a sterically hindered silane monomer or an acetoacetoxy-containing monomer. When the crosslinkable site is a sterically hindered silane monomer the star polymer also contains an internal catalyst, and when the crosslinkable site is an acetoacetoxy group the colloid **composition** also contains a non-polymeric polyfunctional amine. The star polymer can be either a random or heteroarm star polymer. The colloid **composition** is useful in the formation and stabilization of emulsion polymers, as a replacement for surfactants currently used for this purpose. Emulsion polymers formulated with the colloid **composition** are especially useful for one-part

coatings such as paints and **adhesives**. Thus, heating a mixture of i-PrOH 100, vinyltriisopropoxysilane 3, methacrylic acid 7, Me methacrylate 90, pentaerythritol tetrakis(3-mercaptopropionate) 6.6, AIBN 0.5, **NH4OH** 6 and **water** 300 parts at reflux for 2 h gave a random star polymer in solution with solids content 14.0%, Brookfield viscosity 25 cPs, particle size 104 nm, surface tension 38 dyne/cm and mol. weight 30,000. Polymerizing Bu acrylate 250 with Me methacrylate 250 in **water** 174 containing the star polymer 250.6 and **NH4OH** 51 dissolved in **water** 51 parts gave a copolymer emulsion with solids content 48.73%, viscosity 178 cPs, particle size 131 nm, min. film formation temperature 7.2° and Tg 20.7°, which was used in a high gloss paint preparation

ST amphiphilic star polymer stabilizer colloid emulsion surfactant replacement; **coating** emulsion stabilization colloid amphiphilic star polymer

IT Paints

(high-gloss; star polymer colloidal stabilizers and uses in emulsion polymers and replacement of surfactants)

IT **Adhesives**

Amphiphiles

Colloids

Emulsifying agents

(star polymer colloidal stabilizers and uses in emulsion polymers and replacement of surfactants)

IT Polymers, preparation

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(star-branched; star polymer colloidal stabilizers and uses in emulsion polymers and replacement of surfactants)

IT 25852-37-3P, Butyl acrylate-methyl methacrylate copolymer

280585-18-4P 439694-35-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(binder for **coating**; star polymer colloidal stabilizers and uses in emulsion polymers and replacement of surfactants)

IT 7575-23-7, Pentaerythritol tetrakis(3-mercaptopropionate)

RL: RCT (Reactant); RACT (Reactant or reagent)

(star polymer core; star polymer colloidal stabilizers and uses in emulsion polymers and replacement of surfactants)

IT **439694-31-2P 439694-32-3P**, Methacrylic acid-methyl methacrylate-2-(2-oxoimidazolidin-1-yl)ethyl methacrylate-vinyltriisopropoxysilane copolymer **439694-33-4P**

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(star-shaped, stabilizers; star polymer colloidal stabilizers and uses in emulsion polymers and replacement of surfactants)

IT **280585-18-4P 439694-35-6P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(binder for **coating**; star polymer colloidal stabilizers and uses in emulsion polymers and replacement of surfactants)

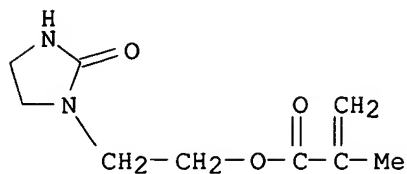
RN 280585-18-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, ethenyltris(1-methylethoxy)silane and 2-(2-oxo-1-imidazolidinyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 86261-90-7

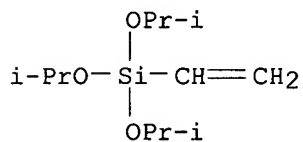
CMF C9 H14 N2 O3



CM 2

CRN 18023-33-1

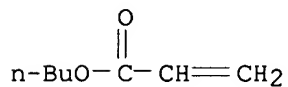
CMF C11 H24 O3 Si



CM 3

CRN 141-32-2

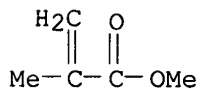
CMF C7 H12 O2



CM 4

CRN 80-62-6

CMF C5 H8 O2



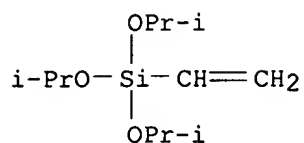
RN 439694-35-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and ethenyltris(1-methylethoxy)silane (9CI) (CA INDEX NAME)

CM 1

CRN 18023-33-1

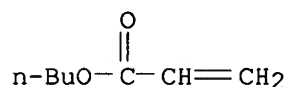
CMF C11 H24 O3 Si



CM 2

CRN 141-32-2

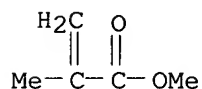
CMF C7 H12 O2



CM 3

CRN 80-62-6

CMF C5 H8 O2



IT **439694-31-2P 439694-32-3P**, Methacrylic acid-methyl methacrylate-2-(2-oxoimidazolidin-1-yl)ethyl methacrylate-vinyltriisopropoxysilane copolymer **439694-33-4P**
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (star-shaped, stabilizers; star polymer colloidal stabilizers and uses in emulsion polymers and replacement of surfactants)

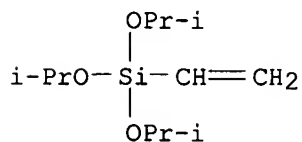
RN 439694-31-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenyltris(1-methylethoxy)silane and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

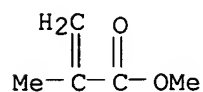
CRN 18023-33-1

CMF C11 H24 O3 Si



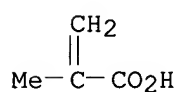
CM 2

CRN 80-62-6
CMF C5 H8 O2



CM 3

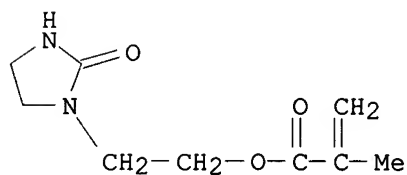
CRN 79-41-4
CMF C4 H6 O2



RN 439694-32-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with ethenyltris(1-methylethoxy)silane, methyl 2-methyl-2-propenoate and 2-(2-oxo-1-imidazolidinyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

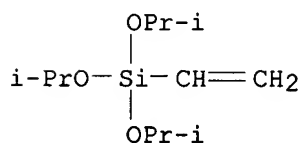
CM 1

CRN 86261-90-7
CMF C9 H14 N2 O3



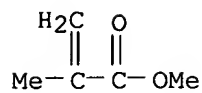
CM 2

CRN 18023-33-1
CMF C11 H24 O3 Si



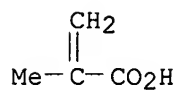
CM 3

CRN 80-62-6
CMF C5 H8 O2



CM 4

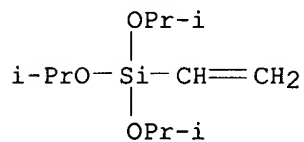
CRN 79-41-4
CMF C4 H6 O2



RN 439694-33-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with butyl 2-propenoate and ethenyltris(1-methylethoxy)silane (9CI) (CA INDEX NAME)

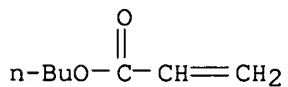
CM 1

CRN 18023-33-1
CMF C11 H24 O3 Si



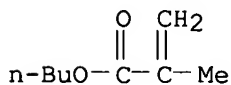
CM 2

CRN 141-32-2
CMF C7 H12 O2



CM 3

CRN 97-88-1
CMF C8 H14 O2



L26 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2000:780911 HCAPLUS
 DN 133:336273
 ED Entered STN: 07 Nov 2000
 TI Biodegradable vinyl alcohol polymers containing lactone rings and carboxyl groups and their **compositions**
 IN Fujiwara, Naoki; Somemiya, Toshitaka; Kusufuji, Takeshi
 PA Kuraray Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 26 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM C08F008-12
 ICS C08F218-02; C08K003-08; C08L029-04; C08F210-02
 CC 38-3 (**Plastics** Fabrication and Uses)
 Section cross-reference(s): 42

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 2000309607 | A2 | 20001107 | JP 1999-346140 | 19991206 |
| PRAI | JP 1998-350144 | A | 19981209 | | |
| | JP 1999-48107 | A | 19990225 | | |

AB The polymers, showing good heat stability, **water** resistance, gas impermeability, and cold impact resistance, satisfy ethylene (I) content 2-19 mol%, degree of polymerization 200-2,000, saponification degree 80-99.99 mol%, and

total content of lactone ring and carboxyl group 0.02-0.4 mol%. Compns. of 100 parts the polymers and 0.0003-1 parts (as Na) alkali metals are also claimed. Thus, 107.2 kg vinyl acetate was polymerized with 15.6 g maleic anhydride at 60° in the presence of 2,2'-azobis(4-methoxy-2,4-dimethylvarelonitrile) while inducing I into the reactor, saponified, and neutralized to give a vinyl alc. polymer showing saponification degree 98.5, I content 7 mol%, and average d.p. 1000, less fisheyes, elasticity 373 kg/mm² (as a 15%-glycerin-blended specimen), excellent cold impact resistance (as a bottle), O permeability 8.2 mL/m²dayatm (as a **coating** on an oriented polypropylene support), and biodegradability 99.4% in soil for 3. day.

ST lactone carboxy contg PVA transparent film; vinyl acetate ethylene maleic anhydride copolymer; oxygen impermeable **coating** ethylene modified PVA; biodegradable transparent bottle vinyl alc polymer; **acetalized** ethylene copolymd PVA impact resistant

IT Bottles

Heat stabilizers

(biodegradable ethylene-copolymd. vinyl alc. polymers containing lactone rings and carboxyl groups)

IT Transparent films

(biodegradable, heat-, impact-, and **water**-resistant;

biodegradable ethylene-copolymd. vinyl alc. polymers containing lactone rings and carboxyl groups)

IT Polyvinyl **acetals**

RL: BPR (Biological process); BSU (Biological study, unclassified); DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

(carboxyl-containing; biodegradable ethylene-copolymd. vinyl alc. polymers containing lactone rings and carboxyl groups)

IT Alkali metals, uses

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (heat stabilizers; biodegradable ethylene-copolymd. vinyl alc. polymers
 containing lactone rings and carboxyl groups)

IT **Water-resistant materials**
Water-resistant materials
 (heat-resistant, impact-resistant, transparent, biodegradable;
 biodegradable ethylene-copolymd. vinyl alc. polymers containing lactone
 rings and carboxyl groups)

IT **Coating materials**
 (transparent, oxygen-impermeable; biodegradable ethylene-copolymd.
 vinyl alc. polymers containing lactone rings and carboxyl groups)

IT **Biodegradable materials**
 (transparent; biodegradable ethylene-copolymd. vinyl alc. polymers
 containing lactone rings and carboxyl groups)

IT **Heat-resistant materials**
Heat-resistant materials
 (water-resistant, impact-resistant, transparent,
 biodegradable; biodegradable ethylene-copolymd. vinyl alc. polymers
 containing lactone rings and carboxyl groups)

IT 107-96-ODP, 3-Mercaptopropionic acid, reaction products with epoxy-containing
 vinyl acetate resins, saponified 692-29-5DP, reaction products with
 saponified
 ethylene-maleic anhydride-vinyl acetate copolymer 28064-24-6DP,
 Ethylene-maleic anhydride-vinyl acetate copolymer, saponified 30731-80-7DP,
 Ethylene-ethyl vinyl ether-maleic anhydride-vinyl acetate copolymer,
 saponified 188617-54-1DP, Allyl glycidyl ether-ethylene-maleic
 anhydride-vinyl acetate copolymer, reaction products with thiol compds.,
 saponified 303954-37-2DP, Ethylene-itaconic acid-maleic anhydride-vinyl
 acetate copolymer, saponified **303954-38-3DP**, Ethylene-maleic
 anhydride-vinyl acetate-vinyltrimethoxysilane copolymer, saponified
 303954-39-4DP, saponified 303954-40-7DP, saponified
 RL: BPR (Biological process); BSU (Biological study, unclassified); DEV
 (Device component use); IMF (Industrial manufacture); PRP (Properties);
 TEM (Technical or engineered material use); BIOL (Biological study); PREP
 (Preparation); PROC (Process); USES (Uses)
 (biodegradable ethylene-copolymd. vinyl alc. polymers containing lactone
 rings and carboxyl groups)

IT 7440-09-7, Potassium, uses 7440-23-5, Sodium, uses
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (heat stabilizer; biodegradable ethylene-copolymd. vinyl alc. polymers
 containing lactone rings and carboxyl groups)

IT **303954-38-3DP**, Ethylene-maleic anhydride-vinyl
 acetate-vinyltrimethoxysilane copolymer, saponified
 RL: BPR (Biological process); BSU (Biological study, unclassified); DEV
 (Device component use); IMF (Industrial manufacture); PRP (Properties);
 TEM (Technical or engineered material use); BIOL (Biological study); PREP
 (Preparation); PROC (Process); USES (Uses)
 (biodegradable ethylene-copolymd. vinyl alc. polymers containing lactone
 rings and carboxyl groups)

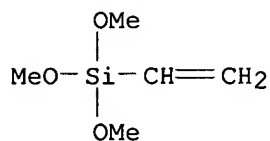
RN 303954-38-3 HCAPLUS

CN Acetic acid ethenyl ester, polymer with ethene, ethenyltrimethoxysilane
 and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

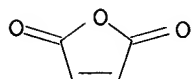
CRN 2768-02-7

CMF C5 H12 O3 Si



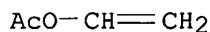
CM 2

CRN 108-31-6
CMF C4 H2 O3



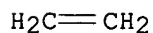
CM 3

CRN 108-05-4
CMF C4 H6 O2



CM 4

CRN 74-85-1
CMF C2 H4



L26 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:21652 HCAPLUS
DN 132:79775
ED Entered STN: 11 Jan 2000
TI **Water-thinned coating resin compositions** and
cured products containing them
IN Kitamoto, Takeshi; Sakai, Sadayuki; Hashimoto, Tomio
PA Toyo Ink Mfg. Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D157-04
ICS C09D005-00; C09D143-04; C08F002-24; C08F002-44; C08F246-00;
C08F230-08; C08F220-56; C08F220-06
CC 42-7 (Coatings, Inks, and Related Products)
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|-------|-----------------|-------|
| ----- | ---- | ----- | ----- | ----- |

PI JP 2000007981 A2 20000111 JP 1998-181770 19980629
 PRAI JP 1998-181770 19980629

AB In radical polymerization of mixts. of (a) 0.1-20% unsatd. monomers containing carbonyl groups, (b) 0.1-20% H₂C:CM₂CO₂C₃H₆SiMeR₁2 or H₂C:CM₂CO₂C₃H₆SiR₂3 (R₁, R₂ = MeO, EtO), (c) 0.1-10% unsatd. monomers containing carboxyl groups, and (d) 50-99.7% other unsatd. monomers in H₂O in the presence of emulsifiers and polymerization initiators, pH of the mixts. before

polymerization is

adjusted to ≥6.0 with **volatile bases** and the resulting copolymer dispersion is mixed with **water-soluble** polyhydrazine compds. in a hydrazine/CO mol. ratio of (0.1-3)/1. Thus, an **aqueous** solution containing diacetoneacrylamide 50.0, γ-methacryloxypropyltrimethoxysilane 50.0, acrylic acid 10.0, Me methacrylate 230.0, Bu acrylate 160.0, Eleminol JS-2 (reactive emulsifier) 65.8, and ammonium persulfate 3.0 parts was mixed with **aqueous** ammonia to pH 7.0, added dropwise to H₂O, and aged at 80° for 2 h to give a **composition** showing excellent storage stability. A rapid-drying, alkali- and **water-resistant coating** was formed from the **composition** mixed with adipic acid dihydrazide.

ST alkoxy silane acrylic polymer **coating** hydrazide crosslinking; **water** resistance emulsion **coating** acrylic polymer; dryability emulsion **coating** acrylic polymer; alkali resistance emulsion **coating** acrylic polymer

IT **Coating materials**

(alkali-resistant; rapid-drying acrylic **aqueous** emulsion **coatings** with good **water** and alkali resistance)

IT **Coating materials**

(**water-resistant**, **water-thinned**; rapid-drying acrylic **aqueous** emulsion **coatings** with good **water** and alkali resistance)

IT 253882-32-5P 253882-34-7P 253882-36-9P
 253882-38-1P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (rapid-drying acrylic **aqueous** emulsion **coatings** with good **water** and alkali resistance)

IT 253882-32-5P 253882-34-7P 253882-36-9P
 253882-38-1P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (rapid-drying acrylic **aqueous** emulsion **coatings** with good **water** and alkali resistance)

RN 253882-32-5 HCAPLUS

CN Hexanedioic acid, dihydrazide, polymer with butyl 2-propenoate, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, Eleminol JS 2, methyl 2-methyl-2-propenoate, 2-propenoic acid and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 253882-31-4

CMF (C10 H20 O5 Si . C9 H15 N O2 . C7 H12 O2 . C6 H14 N4 O2 . C5 H8 O2 . C3 H4 O2 . Unspecified)x

CCI PMS

CM 2

CRN 79585-53-8

CMF Unspecified

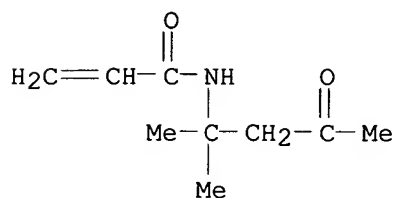
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 2873-97-4

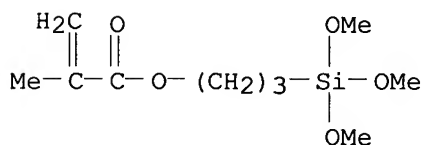
CMF C9 H15 N O2



CM 4

CRN 2530-85-0

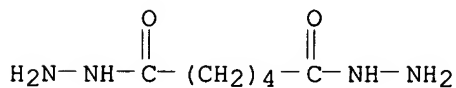
CMF C10 H20 O5 Si



CM 5

CRN 1071-93-8

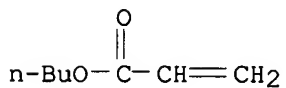
CMF C6 H14 N4 O2



CM 6

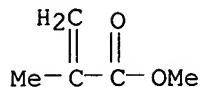
CRN 141-32-2

CMF C7 H12 O2



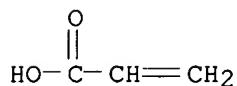
CM 7

CRN 80-62-6
CMF C5 H8 O2



CM 8

CRN 79-10-7
CMF C3 H4 O2



RN 253882-34-7 HCAPLUS
CN Hexanedioic acid, dihydrazide, polymer with butyl 2-propenoate, Eleminol JS 2, ethenylbenzene, ethyl 2-methyl-2-propenoate, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl 3-oxobutanoate, 2-propenoic acid and 3-(triethoxysilyl)propyl 2-methyl-2-propenoate, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 253882-33-6
CMF (C13 H26 O5 Si . C10 H14 O5 . C8 H8 . C7 H12 O2 . C6 H14 N4 O2 . C6 H10 O2 . C3 H4 O2 . Unspecified)x
CCI PMS

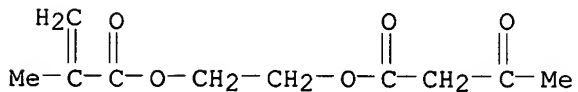
CM 2

CRN 79585-53-8
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

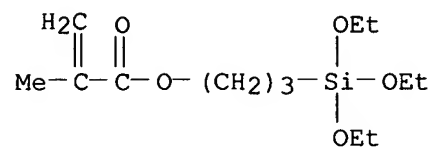
CRN 21282-97-3
CMF C10 H14 O5



CM 4

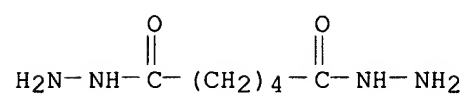
CRN 21142-29-0

CMF C13 H26 O5 Si



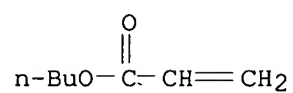
CM 5

CRN 1071-93-8
CMF C6 H14 N4 O2



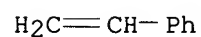
CM 6

CRN 141-32-2
CMF C7 H12 O2



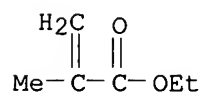
CM 7

CRN 100-42-5
CMF C8 H8



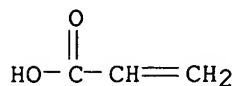
CM 8

CRN 97-63-2
CMF C6 H10 O2



CM 9

CRN 79-10-7
CMF C3 H4 O2



RN 253882-36-9 HCAPLUS
CN Hexanedioic acid, dihydrazide, polymer with butyl 2-propenoate, 3-(dimethoxymethylsilyl)propyl 2-methyl-2-propenoate, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, 2-ethylhexyl 2-propenoate, ethyl 2-propenoate, Latemul S 180, methyl 2-methyl-2-propenoate and 2-propenoic acid, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 253882-35-8
CMF (C11 H20 O2 . C10 H20 O4 Si . C9 H15 N O2 . C7 H12 O2 . C6 H14 N4 O2 . C5 H8 O2 . C5 H8 O2 . C3 H4 O2 . Unspecified)x
CCI PMS

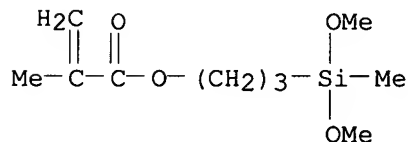
CM 2

CRN 110120-14-4
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

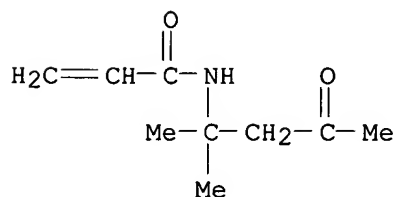
CM 3

CRN 14513-34-9
CMF C10 H20 O4 Si



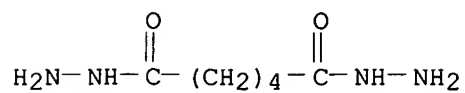
CM 4

CRN 2873-97-4
CMF C9 H15 N O2



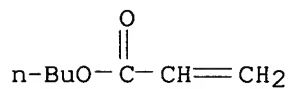
CM 5

CRN 1071-93-8
CMF C6 H14 N4 O2



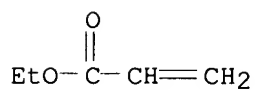
CM 6

CRN 141-32-2
CMF C7 H12 O2



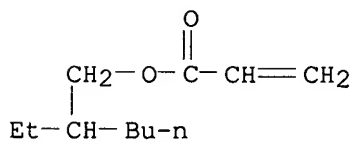
CM 7

CRN 140-88-5
CMF C5 H8 O2



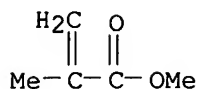
CM 8

CRN 103-11-7
CMF C11 H20 O2



CM 9

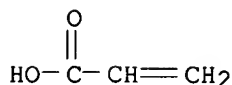
CRN 80-62-6
CMF C5 H8 O2



CM 10

CRN 79-10-7

CMF C3 H4 O2



RN 253882-38-1 HCAPLUS

CN Hexanedioic acid, dihydrazide, polymer with 3-(diethoxymethylsilyl)propyl 2-methyl-2-propenoate, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, ethenylbenzene, 2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, α -sulfo- ω -[4-nonyl-2-(1-propenyl)phenoxy]poly(oxy-1,2-ethanediyl) ammonium salt and 3-(trimethoxysilyl)propyl-2-methyl-2-propenoate, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 253882-37-0

CMF (C12 H24 O4 Si . C11 H20 O2 . C10 H20 O5 Si . C9 H15 N O2 . C8 H8 . C6 H14 N4 O2 . C5 H8 O2 . C4 H6 O2 . (C2 H4 O)n C18 H28 O4 S . H3 N)x

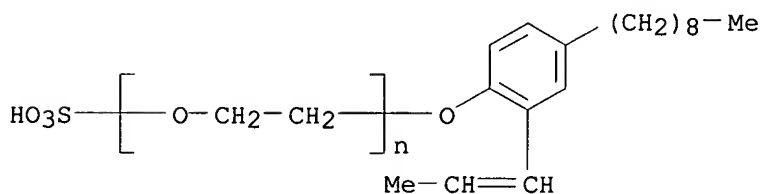
CCI PMS

CM 2

CRN 140651-97-4

CMF (C2 H4 O)n C18 H28 O4 S . H3 N

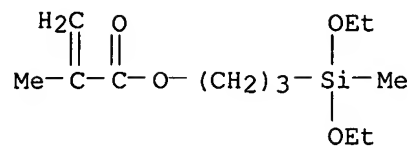
CCI PMS



CM 3

CRN 65100-04-1

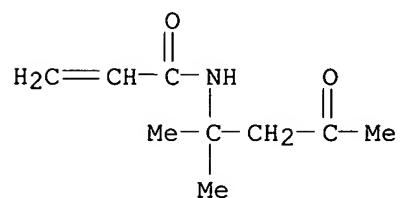
CMF C12 H24 O4 Si



CM 4

CRN 2873-97-4

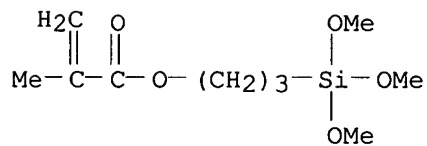
CMF C9 H15 N O2



CM 5

CRN 2530-85-0

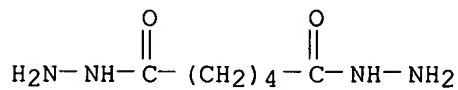
CMF C10 H20 O5 Si



CM 6

CRN 1071-93-8

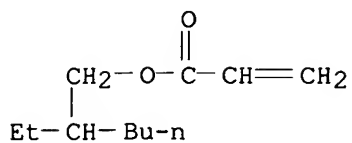
CMF C6 H14 N4 O2



CM 7

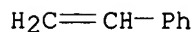
CRN 103-11-7

CMF C11 H20 O2



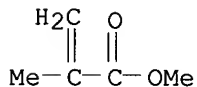
CM 8

CRN 100-42-5
CMF C8 H8



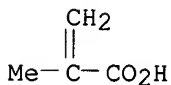
CM 9

CRN 80-62-6
CMF C5 H8 O2



CM 10

CRN 79-41-4
CMF C4 H6 O2



L26 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:650413 HCAPLUS
DN 131:273203
ED Entered STN: 13 Oct 1999
TI **Water**-thinned one-component polymer **coating**
compositions with good storage stability and high dryability and
their manufacture
IN Kitamoto, Takeshi; Sakai, Sadayuki
PA Toyo Ink Mfg. Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08F246-00
ICS C08F002-24; C08F002-44; C09D005-00; C09D125-04; C09D133-02;
C09D133-06; C09D143-04; C09D157-04; C08F246-00; C08F220-10;

C08F212-08; C08F220-06; C08F230-08
 CC 42-7 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 35

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 11279235 | A2 | 19991012 | JP 1998-83189 | 19980330 |
| PRAI | JP 1998-83189 | | 19980330 | | |

AB In manufacture of title compns. by radical polymerization of mixts. containing radically

polymerizable ethylenically unsatd. monomers containing 0.1-10% CO₂H-containing monomers and 0.1-20% CH₂:CMeCO₂C₃H₆SiMeR₂ or CH₂:CMeCO₂C₃H₆SiR₃ (R = OMe, OEt) in the presence of emulsifying agents, polymerization initiators, and H₂O, **volatile bases** are preliminarily mixed to control pH before polymerization to ≥6.0. Thus, an **aqueous composition** containing Me methacrylate, Bu acrylate, acrylic acid, (γ-methacryloxypropyl)trimethoxysilane, and Eleminol JS 2 (reactive emulsifier) was mixed with an NH₄OH **aqueous** solution (to pH 7.0) and heated to give a polymer **composition** with good storage stability, which was mixed with **coating** additives and applied on a glass sheet to give a **coating** showing good alkali and **water**-whitening resistance.

ST **water** thinned acrylic polymer **coating** dryability; pH control acrylic polymer **coating** storage stability; alkali resistance **coating** alkoxysilyl acrylic polymer; carboxy acrylic polymer **coating** storage stability

IT **Coating materials**
 (alkali-resistant; manufacture of **water**-thinned acrylic polymer **coating** compns. with good storage stability and high dryability)

IT Polymerization
 (radical; manufacture of **water**-thinned acrylic polymer **coating** compns. with good storage stability and high dryability)

IT **Coating materials**
 (**water**-resistant; manufacture of **water**-thinned acrylic polymer **coating** compns. with good storage stability and high dryability)

IT **Coating materials**
 (**water**-thinned; manufacture of **water**-thinned acrylic polymer **coating** compns. with good storage stability and high dryability)

IT 245655-73-6P, Acrylic acid-butyl acrylate-Eleminol JS
 2-(γ-methacryloxypropyl)trimethoxysilane-methyl methacrylate copolymer 245655-75-8P 245655-77-0P
 245655-79-2P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (manufacture of **water**-thinned acrylic polymer **coating** compns. with good storage stability and high dryability)

IT 7664-41-7, Ammonia, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (pH-controlling agents; manufacture of **water**-thinned acrylic polymer **coating** compns. with good storage stability and high dryability)

IT 245655-73-6P, Acrylic acid-butyl acrylate-Eleminol JS
 2-(γ-methacryloxypropyl)trimethoxysilane-methyl methacrylate copolymer 245655-75-8P 245655-77-0P
 245655-79-2P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of **water**-thinned acrylic polymer **coating** compns. with good storage stability and high dryability)

RN 245655-73-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl
2-propenoate, Eleminol JS 2, 2-propenoic acid and 3-
(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79585-53-8

CMF Unspecified

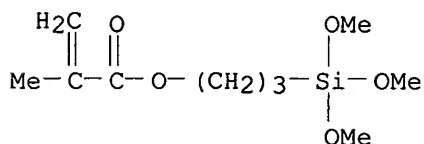
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 2530-85-0

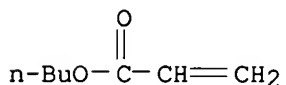
CMF C10 H20 O5 Si



CM 3

CRN 141-32-2

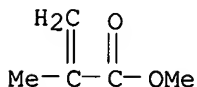
CMF C7 H12 O2



CM 4

CRN 80-62-6

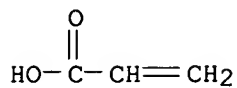
CMF C5 H8 O2



CM 5

CRN 79-10-7

CMF C3 H4 O2



RN 245655-75-8 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-(triethoxysilyl)propyl ester, polymer with butyl 2-propenoate, Eleminol JS 2, ethenylbenzene, ethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

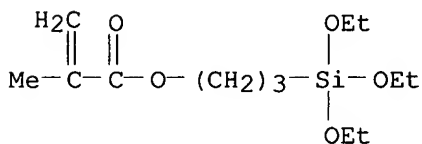
CM 1

CRN 79585-53-8
 CMF Unspecified
 CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

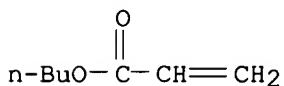
CM 2

CRN 21142-29-0
 CMF C13 H26 O5 Si



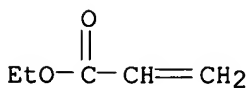
CM 3

CRN 141-32-2
 CMF C7 H12 O2



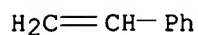
CM 4

CRN 140-88-5
 CMF C5 H8 O2



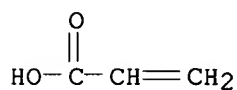
CM 5

CRN 100-42-5
CMF C8 H8



CM 6

CRN 79-10-7
CMF C3 H4 O2



RN 245655-77-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(dimethoxymethylsilyl)propyl ester, polymer with butyl 2-propenoate, 2-ethylhexyl 2-propenoate, ethyl 2-propenoate, Latemul S 180, methyl 2-methyl-2-propenoate and 2-propenoic acid (9CI)
(CA INDEX NAME)

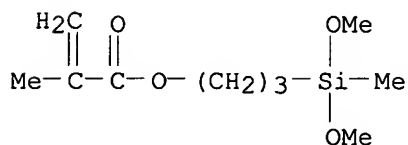
CM 1

CRN 110120-14-4
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

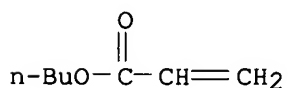
CM 2

CRN 14513-34-9
CMF C10 H20 O4 Si



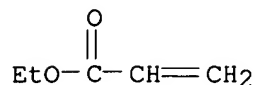
CM 3

CRN 141-32-2
CMF C7 H12 O2



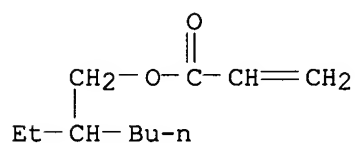
CM 4

CRN 140-88-5
CMF C5 H8 O2



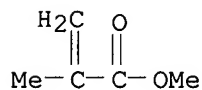
CM 5

CRN 103-11-7
CMF C11 H20 O2



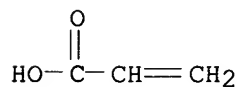
CM 6

CRN 80-62-6
CMF C5 H8 O2



CM 7

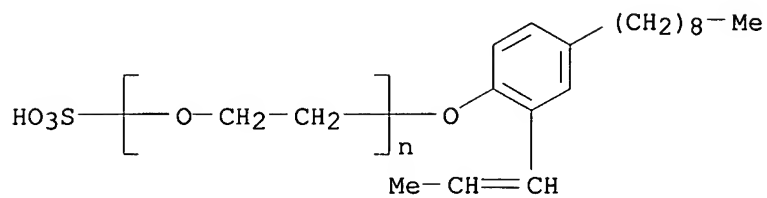
CRN 79-10-7
CMF C3 H4 O2



RN 245655-79-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(diethoxymethylsilyl)propyl ester, polymer with ethenylbenzene, 2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate, 2-propenoic acid, α -sulfo- ω -[4-nonyl-2-(1-propenyl)phenoxy]poly(oxy-1,2-ethanediyl) ammonium salt and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

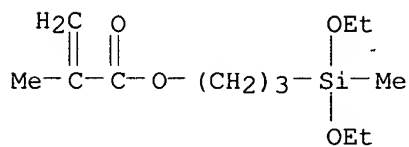
CM 1

CRN 140651-97-4
 CMF (C2 H4 O)_n C18 H28 O4 S . H3 N
 CCI PMS



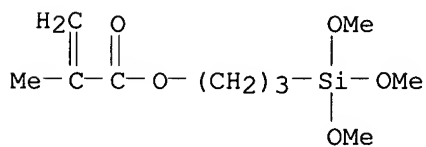
CM 2

CRN 65100-04-1
 CMF C12 H24 O4 Si



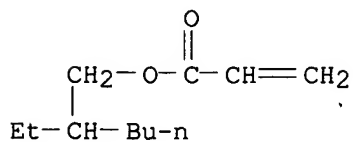
CM 3

CRN 2530-85-0
 CMF C10 H20 O5 Si



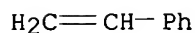
CM 4

CRN 103-11-7
 CMF C11 H20 O2



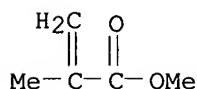
CM 5

CRN 100-42-5
CMF C8 H8



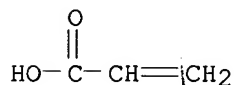
CM 6

CRN 80-62-6
CMF C5 H8 O2



CM 7

CRN 79-10-7
CMF C3 H4 O2



L26 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:746054 HCAPLUS
DN 128:34886
ED Entered STN: 27 Nov 1997
TI Preparation of **water**-stabilized organosilane compounds and
methods for **coating** substrates with them
IN Elfersy, Jacques; Moses, Timoth C.; Liebeskind, Lanny S.; Allred, Gary D.
PA Bioshield Technologies, Inc., USA
SO PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07F007-18
ICS A61L002-18; C07F009-09; A61L031-00; D06M016-00; A01N055-00;
C03C017-30; A23L003-3544; A23L003-3481
CC 29-6 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 35, 42, 63

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|-----------------|----------|
| PI | WO 9742200 | A1 | 19971113 | WO 1997-US8913 | 19970507 |
| | W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, | | | | |

SI, SK, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB,
 GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,
 ML, MR, NE, SN, TD, TG

| | | | | |
|---------------------|----|----------|----------------|----------|
| AU 9730113 | A1 | 19971126 | AU 1997-30113 | 19970507 |
| BR 9702243 | A | 19991228 | BR 1997-2243 | 19970507 |
| NZ 329397 | A | 20000128 | NZ 1997-329397 | 19970507 |
| IL 122555 | A1 | 20021201 | IL 1997-122555 | 19970507 |
| PRAI US 1996-16985P | P | 19960507 | | |
| US 1996-655873 | A | 19960507 | | |
| WO 1997-US8913 | W | 19970507 | | |

- AB The products of reacting organosilanes R_nSiX_{4-n} ($n = 0-3$; each R = non-hydrolyzable organic group; each X = hydrolyzable group) with polyols containing at least three hydroxy groups, where any two of the hydroxy groups are separated by at least three intervening atoms, are claimed. An example is the result of mixing 5% weight/volume **aqueous** [(MeO) $3SiCH_2CH_2CH_2$ Me $2NC18H37$]Cl and **aqueous** pentaerythritol; the solution is believed to contain linear and/or cross-linked oligomers generated by the formation of an equilibrating mixture of intramol. O-Si-O bonds within the same mol. of $\{C18H37NMe_2CH_2CH_2CH_2Si(OH)_3-n[OCH_2C(CH_2OH)_3]_n\}Cl$ and by formation of intermol. O-Si-O bonds between different of these mols. Other example organosilanes include 3-chloropropyltrimethylsilane, 3-chloropropyltrimethoxysilane, octadecyltrimethoxysilane, perfluorooctyltriethoxysilane, (MeO) $3Si(CH_2)_3NHC(O)C_7F_{15}$, (MeO) $3Si(CH_2)_3NHSO_2C_7F_{15}$, $NH_2(CH_2)_2NH(CH_2)_3Si(OMe)_3$, $NaO(MeO)P(O)(CH_2)_3Si(OH)_3$, and $H_2C:CHSiCl_3$. Other example polyols include dipentaerythritol, tris(hydroxymethyl)ethane, tris(hydroxymethyl)aminomethane, and trimethyl(tris(**hydroxymethyl**)methyl)**ammonium** iodide. These products do not suffer from undesirable self-condensation in **water** and are non-toxic, non-flammable, simple, economical and operable over a wide variety of pH ranges. A method of treating a substrate by contacting the substrate with the product, compound, or **composition** for a period of time sufficient for treatment of the substrate is claimed. Claimed applications include dyeing substrates, antimicrobially treating food articles, antimicrobially **coating** fluid containers used for containing a human or animal consumable product, antimicrobially **coating** latex medical articles, antimicrobially treating concrete pipe, tooth brush, comb, hair brush, denture, orthodontic retainer, a spa or pool filter, an air filter, an HVAC air system, cabin air system, etc.
- ST **water** stabilized organosilane prepn **coating**; polyol reaction product antimicrobial organosilane; antimicrobial **water** stabilized organosilane prepn **coating**; silane **water** stabilized prepn **coating**
- IT Silanes
 RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (organosilanes; preparation of **water**-stabilized antimicrobial organosilane compds. and methods for **coating** substrates with them)
- IT Alcohols, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (polyhydric; preparation of **water**-stabilized antimicrobial organosilane compds. and methods for **coating** substrates with them)
- IT Antimicrobial agents
Coating process

(preparation of water-stabilized antimicrobial organosilane compds. and methods for coating substrates with them)

IT 75-54-7DP, Dichloro(methyl)silane, reaction products with **aqueous** polyols 75-78-5DP, Dichlorodimethylsilane, reaction products with **aqueous** polyols 75-79-6DP, Trichloro(methyl)silane, reaction products with **aqueous** polyols 75-94-5DP, Trichloro(vinyl)silane, reaction products with **aqueous** polyols 77-85-0DP, reaction products with organosilanes 77-86-1DP, Tris(hydroxymethyl)aminomethane, reaction products with organosilanes 77-99-6DP, reaction products with organosilanes 78-07-9DP, Triethoxy(ethyl)silane, reaction products with **aqueous** polyols 78-08-0DP, Triethoxy(vinyl)silane, reaction products with **aqueous** polyols 78-24-0DP, Tripentaerythritol, reaction products with organosilanes 80-10-4DP, Dichlorodiphenylsilane, reaction products with **aqueous** polyols 98-13-5DP, Trichloro(phenyl)silane, reaction products with **aqueous** polyols 115-21-9DP, Trichloro(ethyl)silane, reaction products with **aqueous** polyols 115-77-5DP, reaction products with organosilanes 126-11-4DP, Tris(hydroxymethyl)nitromethane, reaction products with organosilanes 126-58-9DP, Dipentaerythritol, reaction products with organosilanes 141-57-1DP, Trichloro(propyl)silane, reaction products with **aqueous** polyols 149-74-6DP, Dichloro(methyl)(phenyl)silane, reaction products with **aqueous** polyols 775-56-4DP, Diethoxy(methyl)(phenyl)silane, reaction products with **aqueous** polyols 919-30-2DP, reaction products with **aqueous** polyols 1067-25-0DP, Trimethoxy(propyl)silane, reaction products with **aqueous** polyols 1112-39-6DP, reaction products with **aqueous** polyols 1185-55-3DP, reaction products with **aqueous** polyols 1760-24-3DP, N-(3-Trimethoxysilylpropyl)ethylenediamine, reaction products with **aqueous** polyols 2344-83-4DP, (3-Chloropropyl)trimethylsilane, reaction products with **aqueous** polyols 2530-83-8DP, (3-Glycidoxypropyl)trimethoxysilane, reaction products with **aqueous** polyols 2530-85-0DP, reaction products with **aqueous** polyols 2530-87-2DP, (3-Chloropropyl)trimethoxysilane, reaction products with **aqueous** polyols 2550-06-3DP, Trichloro(3-chloropropyl)silane, reaction products with **aqueous** polyols 2602-34-8DP, (3-Glycidoxypropyl)triethoxysilane, reaction products with **aqueous** polyols 2768-02-7DP, reaction products with **aqueous** polyols 2943-75-1DP, reaction products with **aqueous** polyols 2996-92-1DP, reaction products with **aqueous** polyols 3069-42-9DP, Trimethoxy(octadecyl)silane, reaction products with **aqueous** polyols 4130-08-9DP, Triacetoxo(vinyl)silane, reaction products with **aqueous** polyols 4376-78-7DP, Tetrapentaerythritol, reaction products with organosilanes 5089-70-3DP, (3-Chloropropyl)triethoxysilane, reaction products with **aqueous** polyols 5314-55-6DP, Ethyltrimethoxysilane, reaction products with **aqueous** polyols 5356-85-4DP, Methylbis(trimethylsilyloxy)(vinyl)silane, reaction products with **aqueous** polyols 5581-66-8DP, Methyltripropoxysilane, reaction products with **aqueous** polyols 10025-78-2DP, Trichlorosilane, reaction products with **aqueous** polyols 10026-04-7DP, Tetrachlorosilane, reaction products with **aqueous** polyols 10088-50-3DP, (2-((Chloromethyl)phenyl)ethyl)triethoxysilane, reaction products with **aqueous** polyols 13688-90-9DP, Trichloro(4-(chloromethyl)phenyl)silane, reaction products with **aqueous** polyols 13822-56-5DP, 3-(Trimethoxysilyl)propylamine, reaction products with **aqueous** polyols 13829-21-5DP, Trichloro(decyl)silane, reaction products with **aqueous** polyols 14579-03-4DP, reaction products with **aqueous** polyols 16753-62-1DP, Dimethoxy(methyl)(vinyl)silane, reaction products with **aqueous** polyols 17096-07-0DP, 3-(Tris(trimethylsilyloxy)silyl)propyl 2-methyl-2-propenoate, reaction

products with **aqueous** polyols 17887-45-5DP, Dichloro(methyl)(2-(4-methylphenyl)ethyl)silane, reaction products with **aqueous** polyols 18395-30-7DP, Isobutyltrimethoxysilane, reaction products with **aqueous** polyols 21142-29-0DP, reaction products with **aqueous** polyols 27668-52-6DP, Dimethyl(octadecyl)(3-(trimethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 27668-53-7DP, (Dodecyl)dimethyl(3-(trimethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 31001-77-1DP, (3-Mercaptopropyl)dimethoxy(methyl)silane, reaction products with **aqueous** polyols 34937-00-3DP, Z-6032, reaction products with **aqueous** polyols 35141-36-7DP, Trimethyl(3-(trimethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 41051-80-3P, (3-(Diethylamino)propyl)trimethoxysilane 41591-87-1DP, Dimethyl(tetradecyl)(3-(trimethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 41591-88-2DP, Cetyldimethyl(3-(trimethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 41591-90-6DP, Eicosyldimethyl(3-(trimethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 50975-76-3DP, (2-((Chloromethyl)phenyl)ethyl)trimethoxysilane, reaction products with **aqueous** polyols 53662-11-6DP, Triethyl(3-(trimethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 58274-32-1DP, Trichloro(2-((chloromethyl)phenyl)ethyl)silane, reaction products with **aqueous** polyols 62117-57-1DP, Dimethyl(octadecyl)(3-(triethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 68959-20-6DP, Didecyl(methyl)(3-(trimethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 76995-03-4DP, Decyldimethyl(3-(trimethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 83354-12-5DP, Dimethyl(octyl)(3-(trimethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 96305-13-4DP, Triethoxy(heptadecafluorooctyl)silane, reaction products with **aqueous** polyols 98046-76-5DP, N-3-(Trimethoxysilyl)propylpentadecafluorooctanamide, reaction products with **aqueous** polyols 102722-08-7DP, (1,1-Bis(hydroxymethyl)-2-hydroxyethyl)trimethylammonium iodide, reaction products with organosilanes 106415-29-6DP, Dimethyl(octadecyl)(3-(trimethoxysilyl)propyl)ammonium bromide, reaction products with **aqueous** polyols 110338-17-5DP, N-(3-(Trimethoxysilyl)propyl)heptadecafluorooctanesulfonamide, reaction products with **aqueous** polyols 117856-01-6DP, Didecyl(methyl)(3-(trimethoxysilyl)propyl)ammonium bromide, reaction products with **aqueous** polyols 143203-33-2DP, Tributyl(3-(trimethoxysilyl)propyl)ammonium chloride, reaction products with **aqueous** polyols 154380-29-7DP, N-3-(Trimethoxysilyl)propylnonadecafluorodecanamide, reaction products with **aqueous** polyols 199524-07-7DP, N-3-(Trimethoxysilyl)propyltricosafuorododecanamide, reaction products with **aqueous** polyols 199524-08-8DP, N-3-(Trimethoxysilyl)propylheptacosafuorotetradecanamide, reaction products with **aqueous** polyols 199524-09-9DP, N-3-(Trimethoxysilyl)propyluntriacontafluorohexadecanamide, reaction products with **aqueous** polyols 199524-10-2DP, N-3-(Trimethoxysilyl)propylpentatriacontafluorooctadecanamide, reaction products with **aqueous** polyols 199524-11-3DP, Dimethyl(3-((octanoyl)amino)propyl)(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-12-4DP, (3-((Decanoyl)amino)propyl)dimethyl(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-13-5DP, (3-((Dodecanoyl)amino)propyl)dimethyl(3-(trimethoxysilyl)propyl)ammonium,

reaction products with **aqueous** polyols 199524-14-6DP, Dimethyl(3-((tetradecanoyl)amino)propyl)(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-15-7DP, (3-((Hexadecanoyl)amino)propyl)dimethyl(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-16-8DP, Dimethyl(3-((octadecanoyl)amino)propyl)(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-17-9DP, Dimethyl(3-((pentadecafluorooctanoyl)amino)propyl)(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-18-0DP, Dimethyl(3-((nonadecafluorodecanoyl)amino)propyl)(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-19-1DP, Dimethyl(3-((tricosafuorododecanoyl)amino)propyl)(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-20-4DP, (3-((Heptacosafuorotetradecanoyl)amino)propyl)dimethyl(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-21-5DP, Dimethyl(3-(trimethoxysilyl)propyl)(3-((untriacontafluorohexadecanoyl)amino)propyl)ammonium, reaction products with **aqueous** polyols 199524-22-6DP, Dimethyl(3-((pentatriacontafluorooctadecanoyl)amino)propyl)(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-23-7DP, Dimethyl(3-((heptadecafluorooctylsulfonyle)amino)propyl)(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-24-8DP, Dimethyl(3-((heneicosafuorodecylsulfonyle)amino)propyl)(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-25-9DP, Dimethyl(3-((pentacosafuorododecylsulfonyle)amino)propyl)(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-26-0DP, (3-((Nonacosafuorotetradecylsulfonyle)amino)propyl)dimethyl(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-27-1DP, Dimethyl(3-(trimethoxysilyl)propyl)(3-((tritriacontafluorohexadecylsulfonyle)amino)propyl)ammonium, reaction products with **aqueous** polyols 199524-28-2DP, Dimethyl(3-((pentatriacontafluoroheptadecylsulfonyle)amino)propyl)(3-(trimethoxysilyl)propyl)ammonium, reaction products with **aqueous** polyols 199524-29-3DP, reaction products with **aqueous** polyols

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of **water**-stabilized antimicrobial organosilane compds. and methods for **coating** substrates with them)

IT 124-28-7, Dimethyl(octadecyl)amine 2530-87-2, (3-Chloropropyl)trimethoxysilane

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of **water**-stabilized antimicrobial organosilane compds. and methods for **coating** substrates with them)

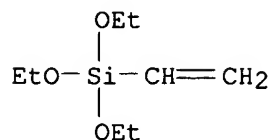
IT 78-08-0DP, Triethoxy(vinyl)silane, reaction products with **aqueous** polyols 2530-85-0DP, reaction products with **aqueous** polyols 2768-02-7DP, reaction products with **aqueous** polyols 4130-08-9DP, Triacetoxymethyl(vinyl)silane, reaction products with **aqueous** polyols 16753-62-1DP, Dimethoxymethyl(vinyl)silane, reaction products with **aqueous** polyols 21142-29-0DP, reaction products with **aqueous** polyols 34937-00-3DP, Z-6032, reaction products with **aq** polyols

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of **water**-stabilized antimicrobial organosilane compds. and methods for **coating** substrates with them)

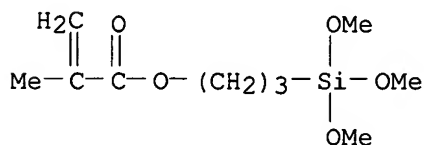
RN 78-08-0 HCAPLUS

CN Silane, ethenyltriethoxy- (9CI) (CA INDEX NAME)



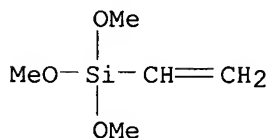
RN 2530-85-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester (9CI) (CA INDEX NAME)



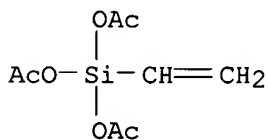
RN 2768-02-7 HCAPLUS

CN Silane, ethenyltrimethoxy- (9CI) (CA INDEX NAME)



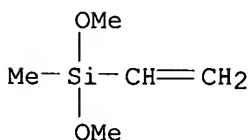
RN 4130-08-9 HCAPLUS

CN Silanetriol, ethenyl-, triacetate (9CI) (CA INDEX NAME)



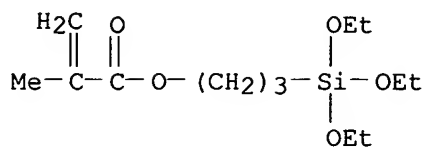
RN 16753-62-1 HCAPLUS

CN Silane, ethenyldimethoxymethyl- (9CI) (CA INDEX NAME)

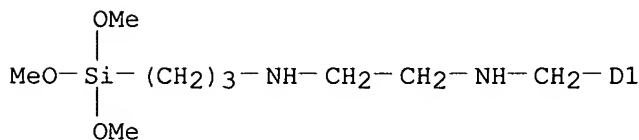
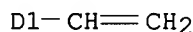


RN 21142-29-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(triethoxysilyl)propyl ester (9CI) (CA INDEX NAME)



| | | |
|----|---|---------|
| RN | 34937-00-3 | HCAPLUS |
| CN | 1,2-Ethanediamine, N-[(ethenylphenyl)methyl]-N'-[3-(trimethoxysilyl)propyl]-, monohydrochloride (9CI) (CA INDEX NAME) | |



● HCl

L26 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:648617 HCAPLUS
DN 127:332526
ED Entered STN: 11 Oct 1997
TI Curing **compositions** with improved adhesion strength
IN Murohashi, Tomoko; Yamamoto, Hirotosugu; Doi, Takao
PA Asahi Glass Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
IC ICM C08L101-10
ICS C08K005-54; C08L083-10
CC 38-3 (**Plastics** Fabrication and Uses)
Section cross-reference(s): 37

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 09255881 | A2 | 19970930 | JP 1996-72761 | 19960327 |
| PRAI | JP 1996-72761 | | 19960327 | | |

AB The comps. with improved mech. properties contain (a) ≥ 1 hydrolysis Si group-containing organic polymers, (b) hydrolysis Si group-containing amine compds., and (c) $(CH_2:CQ_1CO_2Q_0)mT$ [$m = 1-6$; $Q_1 = H, Me$; $Q_0 = direct$

bonding, C1-40 linear or branched divalent (un)substituted hydrocarbon; T = C1-40 organic group containing ≥ 1 substituents or bondings selected from tetrahydrofurfuryl, phenoxy, OH, cyclic acetal bonding]. Thus, polymerizing propyleneoxide using glycerin as an initiator in the presence of Zn hexacyanocobaltate to give polyoxypropylenetriol, modifying OH groups to allyloxy groups, reacting with methyldimethoxysilane in the presence of Pt catalysts gave a methyldimethoxysilylpropyl-containing polyether (A). Then, polyether A 100, CaCO₃ 150, plasticizers 50, thixotropy agents 3, Kayarad TC 110S (tetrahydrofurfuryl-containing monoacrylate) 2.6, N-(2-aminoethyl)-3-aminopropyltrimethoxysilane 2, vinyltrimethoxysilane 5, and bis(acetylacetonato)tin (curing catalysts) 2 parts were mixed and aged under moisture to give test piece showing breaking strength (JIS A 5758, Al plate to Al plate) 8.8 kg/cm², elongation at break 590%, and good **waterproofing** adhesion.

ST curing **compn** adhesion strength; silane contg polyether aminopropyltrimethoxysilane acrylate **compn**

IT **Adhesives**

(curing compns. with improved adhesion strength)

IT Polyoxyalkylenes, uses

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(curing compns. with improved adhesion strength)

IT 1760-24-3DP, polymer with a polyether, an acrylate, and vinyltrimethoxysilane **2768-02-7DP**, Vinyltrimethoxysilane, polymer with a polyether, an acrylate, and an aminosilane compound 16881-77-9DP, Methyldimethoxysilane, reaction products with polyether, polymer with silane compds. and an acrylate 16969-10-1DP, Kayarad R 128H, polymer with a polyether, vinyltrimethoxysilane, and aminosilane compound 26403-58-7DP, Blemmer AE 350, polymer with a polyether, vinyltrimethoxysilane, and aminosilane compound 56641-05-5DP, Kayarad R 564, polymer with a polyether, vinyltrimethoxysilane, and aminosilane compound 87320-05-6DP, Kayarad R 604, polymer with a polyether, vinyltrimethoxysilane, and aminosilane compound 87320-06-7DP, Kayarad TC 110S, polymer with a polyether, vinyltrimethoxysilane, and aminosilane compound 97773-08-5DP, Kayarad R 644, polymer with a polyether, vinyltrimethoxysilane, and aminosilane compound 179462-72-7DP, reaction products with methyldimethoxysilane, polymer with silane compds. and an acrylate

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(curing compns. with improved adhesion strength)

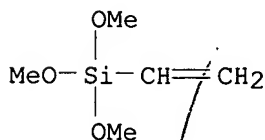
IT **2768-02-7DP**, Vinyltrimethoxysilane, polymer with a polyether, an acrylate, and an aminosilane compound

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(curing compns. with improved adhesion strength)

RN 2768-02-7 HCAPLUS

CN Silane, ethenyltrimethoxy- (9CI) (CA INDEX NAME)



L26 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

AN 1997:378284 HCAPLUS
 DN 127:82578
 ED Entered STN: 18 Jun 1997
 TI Preapplied, curable silicone threadlocking **adhesive** and **sealant**
 IN Rich, Richard D.; Maandi, Eerik; Gontarz, Paula M.; Chu, Hsien-kun
 PA Loctite Corp., USA
 SO U.S., 10 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C09J004-02
 ICS C08L083-07
 NCL 523176000
 CC 38-3 (**Plastics** Fabrication and Uses)
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | US 5635546 | A | 19970603 | US 1996-603845 | 19960222 |
| | US 5853520 | A | 19981229 | US 1997-788724 | 19970123 |
| | EP 791635 | A1 | 19970827 | EP 1997-300597 | 19970130 |
| | EP 791635 | B1 | 20030502 | | |
| | R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | |
| | AT 239058 | E | 20030515 | AT 1997-300597 | 19970130 |
| | CA 2196463 | AA | 19970822 | CA 1997-2196463 | 19970131 |
| | AU 9712508 | A1 | 19970828 | AU 1997-12508 | 19970204 |
| | AU 705810 | B2 | 19990603 | | |
| | JP 09328658 | A2 | 19971222 | JP 1997-50967 | 19970219 |
| PRAI | US 1996-603845 | A3 | 19960222 | | |

AB A title **composition**, useful for threadlocking engageable members of a threaded mech. fastener, e.g., bolt/nut assembly, comprise a reactive silicone (meth)acrylate emulsified in an **aqueous** medium, optionally a polymerizable non-silicone (meth)acrylate monomer or oligomer, and a microencapsulated peroxy initiator for cure of the reactive silicone (meth)acrylate. The emulsion may be applied to at least a portion of an engagement surface of a matable part, dried to form a **coating**, and the surface engaged with the complementary engagement structure, to release the microencapsulated peroxy initiator and bond the matable part and complementary engagement structure. A typical **composition** contained ethoxylated bisphenol A dimethacrylate, Acrysol ASE-60, Me3Si-capped dimethyldimethoxysilane-methacryloxypropyltrimethoxysilane-phenyltrimethoxysilane copolymer (preparation given), n-Bu ferrocene, PhCO2NH4, **NH4OH**, and microencapsulated benzoyl peroxide in **H2O**.

ST methacrylate polysiloxane curable threadlocking **adhesive** emulsion; methacryloxypropyltrimethoxysilane polysiloxane curable threadlocking **sealant**; ethoxylated bisphenol dimethacrylate polysiloxane curable **sealant**; benzoyl peroxide microencapsulated catalyst polysiloxane **sealant**

IT Polysiloxanes, uses
 Polysiloxanes, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-epoxy, **aqueous** emulsions; preapplied, curable silicone threadlocking **adhesive** and **sealant** containing ethoxylated bisphenol A dimethacrylate and anionic acrylic polymer and microencapsulated peroxy catalysts and)

IT Epoxy resins, uses
 Epoxy resins, uses

- RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polysiloxane-, **aqueous** emulsions; preapplied, curable silicone threadlocking **adhesive** and **sealant** containing ethoxylated bisphenol A dimethacrylate and anionic acrylic polymer and microencapsulated peroxy catalysts and)
- IT Peroxides, uses
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking catalysts; preapplied, curable silicone threadlocking **adhesive** and **sealant** containing methacrylate polysiloxanes and ethoxylated bisphenol A dimethacrylate and anionic acrylic polymer and microencapsulated)
- IT **Adhesives**
Sealing compositions
(curable, **aqueous** emulsions; preapplied, curable silicone threadlocking **adhesive** and **sealant** containing methacrylate polysiloxanes and ethoxylated bisphenol A dimethacrylate and anionic acrylic polymer and microencapsulated peroxy catalysts)
- IT Polysiloxanes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(methacrylate-, **aqueous** emulsions; preapplied, curable silicone threadlocking **adhesive** and **sealant** containing ethoxylated bisphenol A dimethacrylate and anionic acrylic polymer and microencapsulated peroxy catalysts and)
- IT Crosslinking catalysts
(microencapsulated peroxides; preapplied, curable silicone threadlocking **adhesive** and **sealant** containing methacrylate polysiloxanes and ethoxylated bisphenol A dimethacrylate and anionic acrylic polymer and)
- IT Bolts
(preapplied, curable silicone threadlocking **adhesive** and **sealant** containing methacrylate polysiloxanes and ethoxylated bisphenol A dimethacrylate and anionic acrylic polymer and microencapsulated peroxy catalysts)
- IT **191721-26-3P**, Ethoxylated bisphenol A dimethacrylate-Methacryloxypropyltrimethoxysilane-Phenyltrimethoxysilane-Tetraethoxysilane copolymer **191721-27-4P**, Dimethyldimethoxysilane-Ethoxylated bisphenol A dimethacrylate-Methacryloxypropyltrimethoxysilane-Phenyltrimethoxysilane copolymer **191721-28-5P**, Ethoxylated bisphenol A dimethacrylate-Methacryloxypropyltrimethoxysilane-Phenyltrimethoxysilane copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**aqueous** emulsion; preapplied, curable silicone threadlocking **adhesive** and **sealant** containing anionic acrylic polymer and microencapsulated peroxide and)
- IT 37325-11-4, Acrysol ASE-60
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**aqueous** emulsion; preapplied, curable silicone threadlocking **adhesive** and **sealant** containing methacrylate polysiloxanes and ethoxylated bisphenol A dimethacrylate and)
- IT 94-36-0, Benzoyl peroxide, uses
RL: CAT (Catalyst use); USES (Uses)
(preapplied, curable silicone threadlocking **adhesive** and **sealant aqueous** emulsions containing methacrylate polysiloxanes and ethoxylated bisphenol A dimethacrylate and anionic acrylic polymer and microencapsulated)

IT 1336-21-6, **Ammonium hydroxide** 1863-63-4,
Ammonium benzoate 31904-29-7, n-Butyl ferrocene
RL: MOA (Modifier or additive use); USES (Uses)
(preapplied, curable silicone threadlocking **adhesive** and
sealant aqueous emulsions containing methacrylate
polysiloxanes and ethoxylated bisphenol A dimethacrylate and anionic
acrylic polymer and microencapsulated peroxy catalysts and)

IT 7732-18-5, **Water**, uses
RL: NUU (Other use, unclassified); USES (Uses)
(preapplied, curable silicone threadlocking **adhesive** and
sealant emulsions containing methacrylate polysiloxanes and
ethoxylated bisphenol A dimethacrylate and anionic acrylic polymer and
microencapsulated peroxy catalysts)

IT 191721-26-3P, Ethoxylated bisphenol A dimethacrylate-
Methacryloxypropyltrimethoxysilane-Phenyltrimethoxysilane-
Tetraethoxysilane copolymer 191721-27-4P,
Dimethyldimethoxysilane-Ethoxylated bisphenol A dimethacrylate-
Methacryloxypropyltrimethoxysilane-Phenyltrimethoxysilane copolymer
191721-28-5P, Ethoxylated bisphenol A dimethacrylate-
Methacryloxypropyltrimethoxysilane-Phenyltrimethoxysilane copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(**aqueous** emulsion; preapplied, curable silicone threadlocking
adhesive and **sealant** containing anionic acrylic polymer
and microencapsulated peroxide and)

RN 191721-26-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with
 α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(2-
methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)], silicic acid
(H₄SiO₄) tetraethyl ester and trimethoxyphenylsilane (9CI) (CA INDEX
NAME)

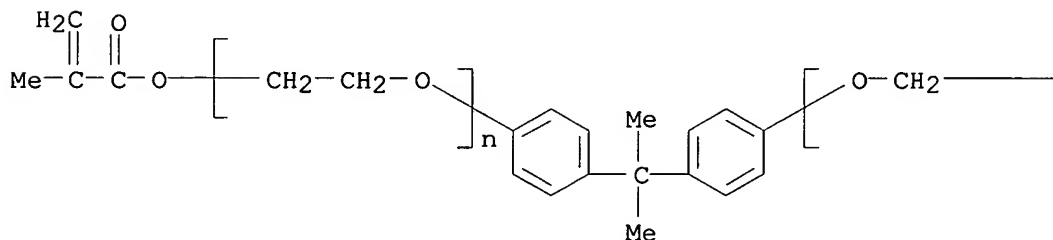
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CRN 41637-38-1

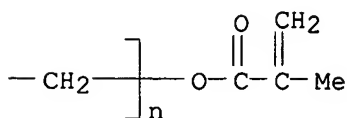
CMF (C₂ H₄ O)_n (C₂ H₄ O)_n C₂₃ H₂₄ O₄

CCI PMS

PAGE 1-A

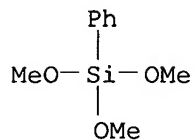


PAGE 1-B



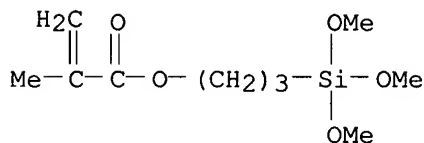
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CRN 2996-92-1
CMF C9 H14 O3 Si



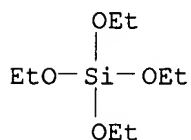
CM 3

CRN 2530-85-0
CMF C10 H20 O5 Si



CM 4

CRN 78-10-4
CMF C8 H20 O4 Si

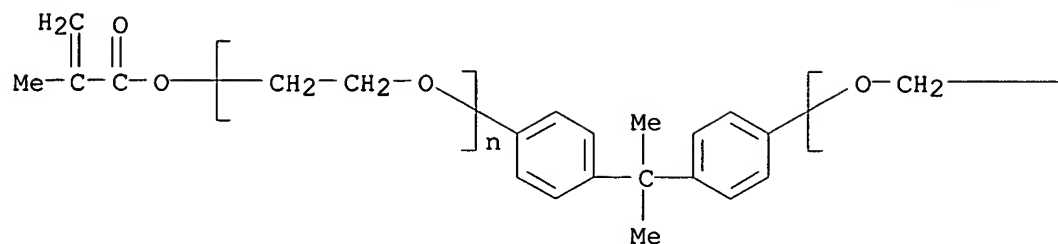


RN 191721-27-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with dimethoxydimethylsilane, α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and trimethoxyphenylsilane (9CI) (CA INDEX NAME)

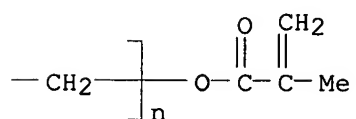
CM 1

CRN 41637-38-1
CMF (C2 H4 O)_n (C2 H4 O)_n C23 H24 O4
CCI PMS

PAGE 1-A



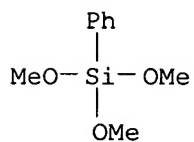
PAGE 1-B



CM 2

CRN 2996-92-1

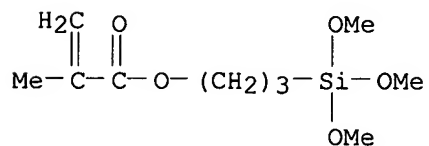
CMF C9 H14 O3 Si



CM 3

CRN 2530-85-0

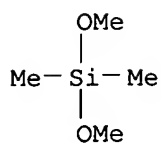
CMF C10 H20 O5 Si



CM 4

CRN 1112-39-6

CMF C4 H12 O2 Si



RN 191721-28-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with α, α' -[(1-methylethylidene)di-4,1-phenylene]bis[ω -(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and trimethoxyphenylsilane (9CI) (CA INDEX NAME)

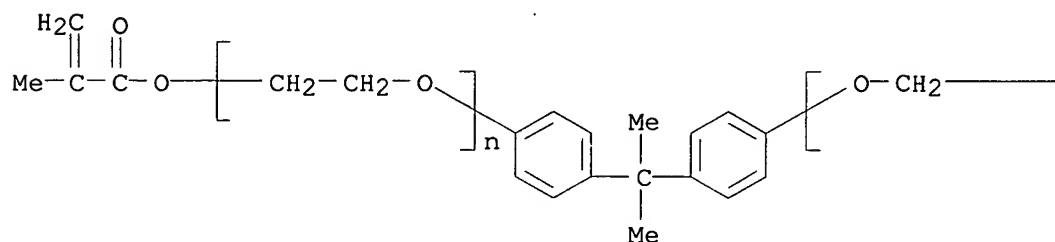
CM 1

CRN 41637-38-1

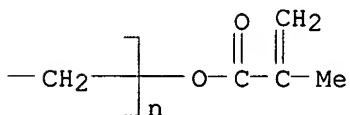
$$\text{CMF} \quad (\text{C}_2 \text{H}_4 \text{O})_n \quad (\text{C}_2 \text{H}_4 \text{O})_n \quad \text{C}_{23} \text{H}_{24} \text{O}_4$$

| CCI | PMS |
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PAGE 1-A



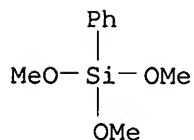
PAGE 1-B



CM 2

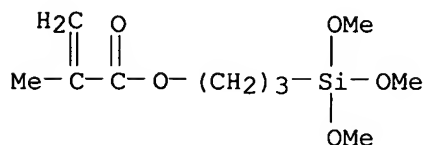
CRN 2996-92-1

CMF C9 H14 O3 Si



CM 3

CRN 2530-85-0
CMF C10 H20 O5 Si



IT 1336-21-6, Ammonium hydroxide
RL: MOA (Modifier or additive use); USES (Uses)
(preapplied, curable silicone threadlocking **adhesive** and
sealant aqueous emulsions containing methacrylate
polysiloxanes and ethoxylated bisphenol A dimethacrylate and anionic
acrylic polymer and microencapsulated peroxy catalysts and)
RN 1336-21-6 HCAPLUS
CN Ammonium hydroxide ((NH4)(OH)) (9CI) (CA INDEX NAME)

H₄N-OH

L26 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:594244 HCAPLUS

DN 123:10960

ED Entered STN: 08 Jun 1995

TI Curable siloxy group-containing copolymer **composition** for
coating with good hardness and surface performance

IN Yonetani, Asako; Komazaki, Shigeru; Oooka, Masataka

PA Dainippon Ink & Chemicals, Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L101-02

ICS C08K005-15; C08L101-10

CC 37-6 (**Plastics** Manufacture and Processing)

Section cross-reference(s): 42

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 07011151 | A2 | 19950113 | JP 1993-153496 | 19930624 |
| PRAI | JP 1993-153496 | | 19930624 | | |

AB The **composition** comprises siloxy group-containing copolymers,
hydroxy-containing compds. and catalysts selected from **hemiacetal**
carboxylates and/or hemiketal carboxylate. A **composition** from a
mixture of Bu acrylate-Bu methacrylate-trimethylsiloxyethyl
methacrylate-styrene copolymer 100, Burnock D 950 26.1 and reaction
product of Et vinyl ether and dichloroacetate 2.46 parts showed gloss
92°, pencil hardness H and good chemical and **water**
resistance.

ST polyurethane acrylate **coating** curing hardness;
hemiacetal hemiketal carboxylate catalyst

IT Catalysts and Catalysis

Chemically resistant materials

(curable siloxy group-containing copolymer **composition** for

coating with good hardness and surface performance)

IT Epoxy resins, uses
 Urethane polymers, uses
 RL: NUU (Other use, unclassified); POF (Polymer in formulation); TEM
 (Technical or engineered material use); USES (Uses)
 (acrylates, curable siloxy group-containing copolymer **composition** for
 coating with good hardness and surface performance)

IT **Acetals**
 RL: CAT (Catalyst use); USES (Uses)
 (hemi-, esters, catalysts; curable siloxy group-containing copolymer
composition for coating with good hardness and surface
 performance)

IT **Acetals**
 RL: CAT (Catalyst use); USES (Uses)
 (hemi-, ketals, esters, catalysts; curable siloxy group-containing
 copolymer **composition** for coating with good hardness and
 surface performance)

IT **Coating materials**
 (water-resistant, curable siloxy group-containing copolymer
composition for coating with good hardness and surface
 performance)

IT 64046-46-4 89490-40-4 163617-57-0
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts; curable siloxy group-containing copolymer **composition** for
 coating with good hardness and surface performance)

IT 163617-52-5 163617-53-6 163617-54-7 163617-55-8
 163617-56-9 164124-28-1
 RL: NUU (Other use, unclassified); POF (Polymer in formulation); TEM
 (Technical or engineered material use); USES (Uses)
 (curable siloxy group-containing copolymer **composition** for
 coating with good hardness and surface performance)

IT 163617-52-5 163617-55-8 163617-56-9
 164124-28-1
 RL: NUU (Other use, unclassified); POF (Polymer in formulation); TEM
 (Technical or engineered material use); USES (Uses)
 (curable siloxy group-containing copolymer **composition** for
 coating with good hardness and surface performance)

RN 163617-52-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with Burnock D 950,
 butyl 2-propenoate, ethenylbenzene and 2-[(trimethylsilyl)oxy]ethyl
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

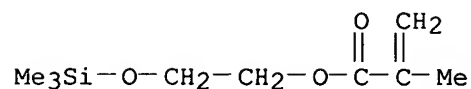
CM 1

CRN 83652-21-5
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

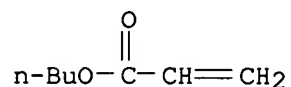
CRN 17407-09-9
 CMF C9 H18 O3 Si



CM 3

CRN 141-32-2

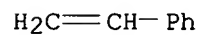
CMF C7 H12 O2



CM 4

CRN 100-42-5

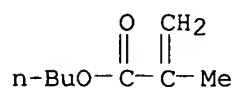
CMF C8 H8



CM 5

CRN 97-88-1

CMF C8 H14 O2



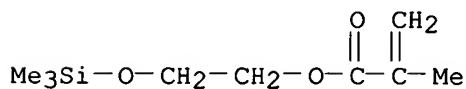
RN 163617-55-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with butyl 2-propenoate, ethenylbenzene, oxiranylmethyl 2-methyl-2-propenoate and 2-[(trimethylsilyl)oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

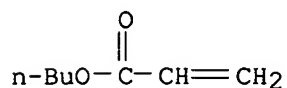
CRN 17407-09-9

CMF C9 H18 O3 Si



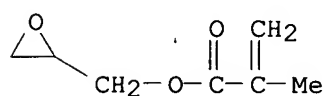
CM 2

CRN 141-32-2
CMF C7 H12 O2



CM 3

CRN 106-91-2
CMF C7 H10 O3



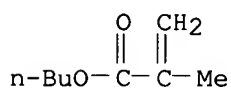
CM 4

CRN 100-42-5
CMF C8 H8



CM 5

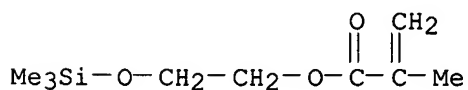
CRN 97-88-1
CMF C8 H14 O2



RN 163617-56-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2,5-furandione and 2-[(trimethylsilyl)oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

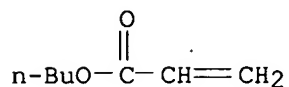
CM 1

CRN 17407-09-9
CMF C9 H18 O3 Si



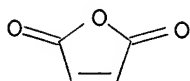
CM 2

CRN 141-32-2
CMF C7 H12 O2



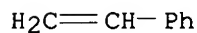
CM 3

CRN 108-31-6
CMF C4 H2 O3



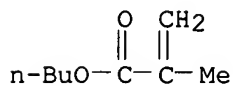
CM 4

CRN 100-42-5
CMF C8 H8



CM 5

CRN 97-88-1
CMF C8 H14 O2



RN 164124-28-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with butyl 2-propenoate, Epolead GT 301, ethenylbenzene and 2-[(trimethylsilyl)oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

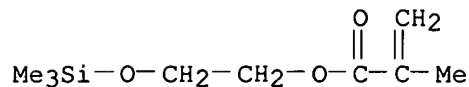
CRN 163913-07-3
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 17407-09-9

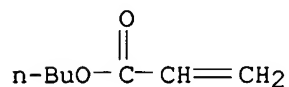
CMF C9 H18 O3 Si



CM 3

CRN 141-32-2

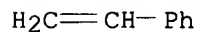
CMF C7 H12 O2



CM 4

CRN 100-42-5

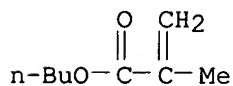
CMF C8 H8



CM 5

CRN 97-88-1

CMF C8 H14 O2



L26 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:255787 HCAPLUS
DN 122:190572
ED Entered STN: 21 Dec 1994
TI Silane-modified vinyl **acetal** polymer **compositions** for
coatings
IN Fujiwara, Naoki
PA Kuraray Co, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D129-14

ICS C08F008-42; C09D005-00

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 35, 58

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 06248228 | A2 | 19940906 | JP 1993-36538 | 19930225 |
| PRAI | JP 1993-36538 | | 19930225 | | |

AB Title compns., alkali-, **water**-, and weather-resistant and useful for inorg. materials such as concrete, mortar, and cement boards, comprise vinyl **acetal** polymers containing 0.01-10 mol% silane-based functional groups. Thus, vinyl acetate-vinyltriacetoxysilane copolymer (mol ratio 99.6:0.4) was 99.4 mol% saponified and 63% **acetalized** with butyraldehyde to give a silane-modified butyral resin (d.p. 1700), which was dissolved in toluene/EtOAc, mixed with di-Bu phthalate, carbon black, powdered Al, and dibutyltin diacetate, and applied to a cement board to 40- μ m thickness. The coat showed no change when immersed in **H2O** for 30 days or in saturated **aqueous** Ca(OH)₂ for 10 days or exposed outdoor for 24 mo.

ST vinyl **acetal** silane modified **coating**; alkali resistance vinyl **acetal** **coating**; **water** resistance vinyl **acetal** **coating**; weather resistance vinyl **acetal** **coating**; cement board vinyl **acetal** **coating**

IT **Coating** materials
(silane-modified vinyl **acetal** polymers; alkali- and **water**- and weather-resistant for cement boards)

IT Vinyl **acetal** polymers
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(butyrals, silane-modified, **coatings**; alkali- and **water**- and weather-resistant for cement boards)

IT Building materials
(cement boards, **coatings** for; silane modified vinyl **acetal** resins with alkali and **water** and weather resistance for)

IT 123-72-8DP, Butyraldehyde, reaction products with saponified vinyl acetate-vinylsilane copolymers **30850-72-7DP**, Vinyl acetate-vinyltrimethoxysilane copolymer, saponified, reaction products with butyraldehyde **36494-29-8DP**, saponified, reaction products with butyraldehyde **86368-68-5DP**, saponified, reaction products with butyraldehyde **86368-72-1DP**, Vinyl acetate-vinyltriacetoxysilane copolymer, saponified, reaction products with butyraldehyde **86368-76-5DP**, 3-Acrylamidopropyltriethoxysilane-vinyl acetate copolymer, saponified, reaction products with butyraldehyde **86368-78-7DP**, saponified, reaction products with butyraldehyde
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**coatings**; alkali- and **water**- and weather-resistant for cement boards)

IT **30850-72-7DP**, Vinyl acetate-vinyltrimethoxysilane copolymer, saponified, reaction products with butyraldehyde **36494-29-8DP**, saponified, reaction products with butyraldehyde **86368-68-5DP**, saponified, reaction products with butyraldehyde **86368-72-1DP**, Vinyl acetate-vinyltriacetoxysilane copolymer, saponified, reaction products with butyraldehyde **86368-76-5DP**, 3-Acrylamidopropyltriethoxysilane-vinyl acetate copolymer, saponified, reaction products with butyraldehyde **86368-78-7DP**, saponified, reaction products with butyraldehyde
RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)
(coatings; alkali- and water- and weather-resistant
for cement boards)

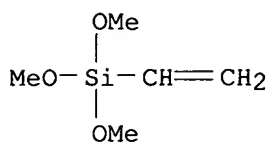
RN 30850-72-7 HCAPLUS

CN Acetic acid ethenyl ester, polymer with ethenyltrimethoxysilane (9CI) (CA INDEX NAME)

CM 1

CRN 2768-02-7

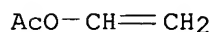
CMF C5 H12 O3 Si



CM 2

CRN 108-05-4

CMF C4 H6 O2



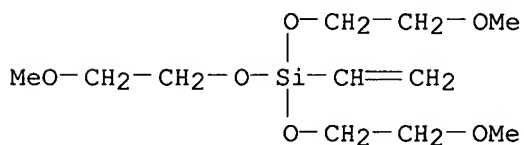
RN 36494-29-8 HCAPLUS

CN Acetic acid ethenyl ester, polymer with 6-ethenyl-6-(2-methoxyethoxy)-2,5,7,10-tetraoxa-6-silaundecane (9CI) (CA INDEX NAME)

CM 1

CRN 1067-53-4

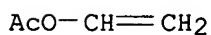
CMF C11 H24 O6 Si



CM 2

CRN 108-05-4

CMF C4 H6 O2



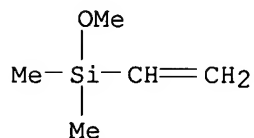
RN 86368-68-5 HCAPLUS

CN Acetic acid ethenyl ester, polymer with ethenylmethoxydimethylsilane (9CI)

(CA INDEX NAME)

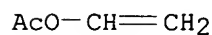
CM 1

CRN 16546-47-7
CMF C5 H12 O Si



CM 2

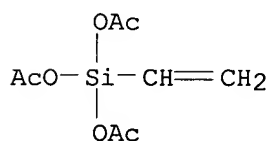
CRN 108-05-4
CMF C4 H6 O2



RN 86368-72-1 HCAPLUS
CN Acetic acid ethenyl ester, polymer with ethenylsilylidyne triacetate (9CI)
(CA INDEX NAME)

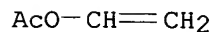
CM 1

CRN 4130-08-9
CMF C8 H12 O6 Si



CM 2

CRN 108-05-4
CMF C4 H6 O2

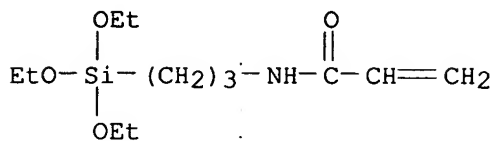


RN 86368-76-5 HCAPLUS
CN Acetic acid ethenyl ester, polymer with N-[3-(triethoxysilyl)propyl]-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 29198-92-3

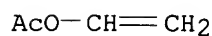
CMF C12 H25 N O4 Si



CM 2

CRN 108-05-4

CMF C4 H6 O2



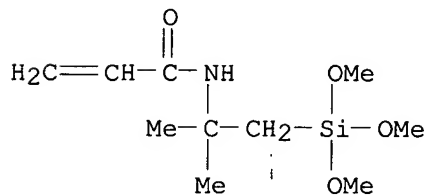
RN 86368-78-7 HCAPLUS

CN Acetic acid ethenyl ester, polymer with N-[1,1-dimethyl-2-(trimethoxysilyl)ethyl]-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 86368-77-6

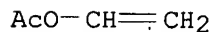
CMF C10 H21 N O4 Si



CM 2

CRN 108-05-4

CMF C4 H6 O2



L26 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:79056 HCAPLUS

DN 120:79056

ED Entered STN: 19 Feb 1994

TI **Water-dispersible pressure-sensitive adhesive compositions**

IN Satsuma, Michio

PA Nitto Denko Corp, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

DT Patent
LA Japanese
IC ICM C09J133-06
CC 38-3 (**Plastics** Fabrication and Uses)
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 05230428 | A2 | 19930907 | JP 1992-72603 | 19920221 |
| JP 1992-72603 | | 19920221 | | |

AB The title comps. with good adhesion to rough surface and peel strength contain (A) polymer emulsions obtained by emulsion polymerization of mixts. containing (meth)acrylic acid alkyl esters, CO₂H-containing monomers, and silane-containing monomers in **aqueous** media and (B) 20-200 parts (based on 100 parts of solids of the emulsions) low-mol.-weight polymers or their salts with Mw 5000-100,000 obtained by polymerization of mixts. containing (meth)acrylic acid alkyl esters and CO₂H-containing monomers in the presence of silane-containing chain-transfer agents. Thus, 100 parts (based on solids) Bu acrylate-methacrylic acid-3-methacryloxypropyltrimethoxysilane-vinyl acetate copolymer (Mw 720,000) and 50 parts acrylic acid-Bu acrylate-Et acrylate-3-mercaptopropyltrimethoxysilane copolymer (Mw 22,000) were mixed with 5 parts 25%-NH₄OH to give a **composition**, which was applied on a polyester film to give a test piece with adhesion to rough surface 250 g/20-mm and holding time ≥120 min.

ST pressure sensitive **adhesive** acrylate copolymer; polyacrylate
adhesive pressure sensitive

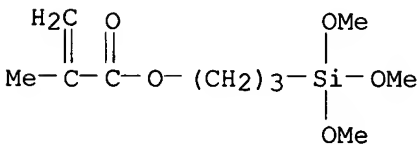
(pressure-sensitive, **water**-thinned, poly(meth)acrylates, with good adhesion to rough surface and peel strength)

RL: TEM (Technical or engineered material use); USES (Uses)
(**adhesives**, pressure-sensitive, **water**-thinned, with
good adhesion to rough surface and peel strength)

RL: TEM (Technical or engineered material use); USES (Uses)
(**adhesives**, pressure-sensitive, **water**-thinned, with
good adhesion to rough surface and peel strength)

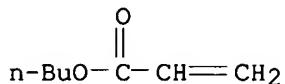
CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, ethenyl acetate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CMF C10 H20 O5 Si



CRN 141-32-2

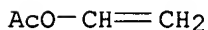
CMF C7 H12 O2



CM 3

CRN 108-05-4

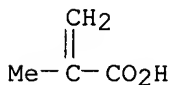
CMF C4 H6 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



L26 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1988:478744 HCAPLUS
 DN 109:78744
 ED Entered STN: 02 Sep 1988
 TI Dust-preventing coated **compositions** for cement floors
 IN Ibaraki, Yukimitsu; Ninomiya, Yoshigo
 PA Dainippon Ink and Chemicals, Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C04B041-63
 ICS C08F002-24; C09D005-00
 ICA C09K003-22
 CC 58-4 (Cement, Concrete, and Related Building Materials)
 Section cross-reference(s): 38

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 63055176 | A2 | 19880309 | JP 1986-199048 | 19860827 |
| PRAI | JP 1986-199048 | | 19860827 | | |

AB The title compns. are polymers prepared by emulsion polymerization of 100 weight parts monomer in 1-6 weight parts of a emulsifier containing 0.5-5 anionic emulsifier (polyoxyalkylene styrylphenyl ether sulfate) and 0-5 weight parts nonionic emulsifier (polyoxyalkylene styrylphenyl ether or polyethylene glycol-polypropylene glycol block copolymer). The **coating** polymers have a glass-transition temperature of 20-60°. Thus, Bu

acrylate 40, Me methacrylate 48.5, acrylonitrile 10, methacrylic acid 1, and divinylbenzene 0.5 were polymerized in the presence of Newcol 707 SF 10 parts, neutralized to pH 8-9 with **NH₄OH**, adjusted with **water** to form an emulsion containing 40% solids, mixed with a 1:1 Et carbitol-tributoxy phosphate film-forming agent, applied at 10 g/49 cm² on a mortar sample, and dried at .apprx.20° for 1 day. The emulsion had excellent permeation into the sample, and the coated sample had excellent **water** resistance and good resistance to alkali and dirt.

ST emulsion copolymn **coating** cement floor; butyl acrylate emulsion copolymn **coating**; methyl methacrylate emulsion copolymn **coating**; acrylonitrile emulsion copolymn **coating**; methacrylic acid emulsion copolymn **coating**; divinylbenzene emulsion copolymn **coating**; Newcol emulsion copolymn cement **coating**

IT Coating materials

(copolymers, by emulsion polymerization, for cement floors)

IT Cement

(floors, polymer coatings for, by emulsion polymerization)

IT 115708-70-8, 2-Ethylhexyl acrylate-itaconic acid- γ -methacryloxypropyltrimethoxysilane-methyl methacrylate copolymer
115785-64-3, Acrylonitrile-butyl acrylate-divinylbenzene-methacrylic acid-methyl methacrylate copolymer 115785-65-4, Acrylonitrile-divinylbenzene-2-ethylhexyl acrylate-methacrylic acid-methyl methacrylate-styrene copolymer

RL: USES (Uses)

(coatings, emulsion polymerization of, for cement floors)

IT 69599-43-5, Emulgen A-90

RL: USES (Uses)

(comps. containing Newcol 707 SF and, for emulsion polymerization of **coating** materials for cement floors)

IT 55866-85-8, Newcol 707 SF

RL: USES (Uses)

(emulsifier, for polymerization of **coating** materials for cement floors)

IT **115708-70-8**, 2-Ethylhexyl acrylate-itaconic acid- γ -methacryloxypropyltrimethoxysilane-methyl methacrylate copolymer

RL: USES (Uses)

(coatings, emulsion polymerization of, for cement floors)

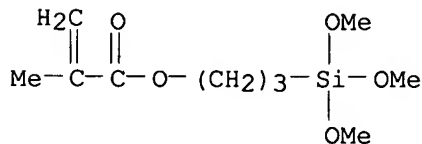
RN 115708-70-8 HCAPLUS

CN Butanedioic acid, methylene-, polymer with 2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

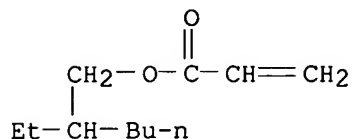
CRN 2530-85-0

CMF C10 H20 O5 Si



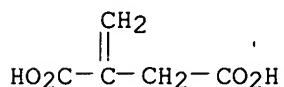
CM 2

CRN 103-11-7
CMF C11 H20 O2



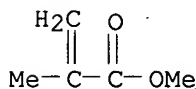
CM 3

CRN 97-65-4
CMF C5 H6 O4



CM 4

CRN 80-62-6
CMF C5 H8 O2



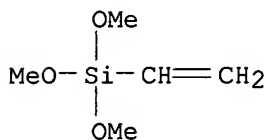
L26 ANSWER 16 OF 18. HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1988:187865 HCAPLUS
DN 108:187865
ED Entered STN: 28 May 1988
TI Silyl polymer **composition**
IN Umpleby, Jeffrey David
PA BP Chemicals Ltd., UK
SO Brit. UK Pat. Appl., 7 pp.
CODEN: BAXXDU
DT Patent
LA English
IC ICM C08F008-00
CC 37-6 (**Plastics** Manufacture and Processing)
Section cross-reference(s): 42

FAN.CNT 1

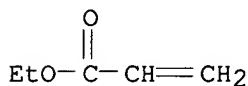
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|----------|
| PI | GB 2188640 | A1 | 19871007 | GB 1987-7889 | 19870402 |
| | WO 8705916 | A2 | 19871008 | WO 1987-GB230 | 19870402 |
| | WO 8705916 | A3 | 19871022 | | |
| | W: FI, JP | | | | |
| | EP 245938 | A2 | 19871119 | EP 1987-302899 | 19870402 |

EP 245938 A3 19871125
 R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE
 JP 63503147 T2 19881117 JP 1987-502165 19870402
 FI 8705291 A 19871201 FI 1987-5291 19871201
 PRAI GB 1986-8119 19860403
 GB 1986-17007 19860711
 WO 1987-GB230 19870402
 AB Compsn., thermoformable into useful articles, e.g. wire **coating** insulators, with reduced tendency to precrosslink, contain silyl polymers, **water** scavengers selected from organic orthoester, **acetal**, ketal, and alkoxysilane and are crosslinkable with **water** in the presence of silanol condensation catalysts. Thus, 200 parts pellets from masterbatch A containing 83:17 ethylene-Et acrylate copolymer 90.75, Bu2Sn dilaurate 0.75, Viton A 1.0, wax 1.5, and antioxidant 6.0% were blended with 3800 parts ethylene-vinyl trimethoxysilane copolymer pellets B, 25 g triethylorthoformate was added, and the A-B blend was extruded into a tape that was crosslinked in boiling **water**.
 ST ethylene acrylate copolymer crosslinking; vinyltrimethoxysilane copolymer crosslinking; silanol condensation catalyst silyl polymer; crosslinking **water** silyl polymer; ethyl orthoformate scavenger silyl crosslinking; **acetal** scavenger **silyl** polymer crosslinking; ketal scavenger silyl polymer crosslinking; alkoxysilane scavenger silyl polymer crosslinking
 IT Crosslinking
 (by **water**, of silyl polymer **composition**, **water** scavengers to prevent premature)
 IT Scavengers
 (for **water**, ortho esters and **acetals** and ketals and alkoxysilanes, in **water**-curable silyl polymer compns.)
 IT Crosslinking catalysts
 (in **water**-curable silyl polymer **composition**)
 IT **Acetals**
 RL: USES (Uses)
 (scavenger, for **water**, in **water**-curable silyl polymer **composition**)
 IT Electric insulators and Dielectrics
 (silyl polymer **composition**, containing **water** scavengers, **water**-curable)
 IT Ortho acids
 RL: USES (Uses)
 (esters, scavenger, for **water**, in **water**-curable silyl polymer **composition**)
 IT **Acetals**
 RL: USES (Uses)
 (ketals, scavenger, for **water**, in **water**-curable silyl polymer **composition**)
 IT 77-76-9, 2,2-Dimethoxypropane 78-39-7, Triethylorthoacetate 105-57-7, 1,1-Diethoxyethane 115-80-0, Triethylorthopropionate 122-51-0, Triethylorthoformate 126-84-1, 2,2-Diethoxypropane 149-73-5, Trimethylorthoformate 497-26-7, 2-Methyl-1,3-dioxolane 534-15-6, 1,1-Dimethoxyethane 588-43-2, Tributylorthoformate 871-22-7, 1,1-Dibutoxyethane 2916-31-6, 2,2-Dimethyl-1,3-dioxolane 3069-40-7, Octyltrimethoxysilane 3453-99-4, 2,2-Dimethoxybutane 4744-10-9, 1,1-Dimethoxypropane 29633-71-4, Tributylorthoacetate
 RL: USES (Uses)
 (scavenger, for **water**, in **water**-curable silyl polymer **composition**)
 IT **79794-64-2**
 RL: USES (Uses)

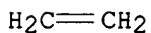
(tape, crosslinked in **water**, thermoformable)
 IT 79794-64-2
 RL: USES (Uses)
 (tape, crosslinked in **water**, thermoformable)
 RN 79794-64-2 HCAPLUS
 CN 2-Propenoic acid, ethyl ester, polymer with ethene and
 ethenyltrimethoxysilane (9CI) (CA INDEX NAME)
 CM 1
 CRN 2768-02-7
 CMF C5 H12 O3 Si



CM 2
 CRN 140-88-5
 CMF C5 H8 O2



CM 3
 CRN 74-85-1
 CMF C2 H4



L26 ANSWER-17 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1987:556473 HCAPLUS
 DN 107:156473
 ED Entered STN: 31 Oct 1987
 TI Manufacture of non-film-forming resin emulsions and their powders
 IN Takarabe, Kunihide; Kuwamura, Shinichi; Ozawa, Hiroshi; Yoshino, Fumio
 PA Dainippon Ink and Chemicals, Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 17 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08F002-22
 ICA C08F291-00; C09D005-02
 CC 42-7 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 37

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 62079202 | A2 | 19870411 | JP 1985-218541 | 19851001 |
| PRAI | JP 1985-218541 | | 19851001 | | |

AB Title emulsions useful for **coatings** having good hiding power and **water**, alkali, and weather resistance, are prepared by two stage free radical polymerization, resulting in porous multilayered particles having **water** contact angle (Aw) of the 2nd layer polymer 1-110° higher than Aw of the 1st layer polymers. Thus, styrene (I), Me methacrylate, acrylonitrile (II), ethylene glycol dimethacrylate, (NH4)2S2O8, emulsifying agents and H2O were mixed at 80° for 1 h, treated with more I, divinylbenzene, p-methylstyrene, (NH4)2S2O8 and H2O for 1 h, neutralized with NH4OH to form a 0.6 μ polymer emulsion which was then mixed with Voncoat EC 880 (acrylic-II copolymer), TiO2 and other additives to form a **composition** forming a **coating** (drying time 3 days) with hiding power (J15K 5400) 0.65, gloss retention 95% (after soaking in H2O for 14 days) and 94% [after soaking in 2% NaOH solution and saturated Ca(OH)2 solution for 14 days], vs.

0.05, 81% and 80%, resp., using a polymer prepared by one stage emulsion polymerization

ST non fiber forming emulsion manuf; porous multilayered microsphere vinyl polymer; two stage emulsion polymn particle; hiding power multilayered particle **coating**; **water** resistance multilayered particle **coating**; alkali resistance multilayered particle **coating**

IT **Coating materials**
(alkali- and **water**-resistant, containing porous multilayered styrene resin emulsions)

IT **Coating materials**
(alkali-resistant, porous, multilayered styrene polymer-containing **coatings** as)

IT Polymerization
(emulsion, two-stage, of vinyl monomers, for porous multilayered particles, for **coatings** with good hiding power)

IT **Coating materials**
(light-resistant, porous, multilayered styrene polymer-containing **coatings** as)

IT **Coating materials**
(**water**-resistant, porous, multilayered styrene polymer-containing **coatings** as)

IT 102257-35-2, Voncoat 5460 102257-39-6, Voncoat EC 880
RL: USES (Uses)
(**coatings** of, with porous multilayered non-film-forming polymer emulsions, for good hiding power and alkali resistance)

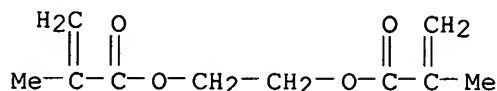
IT 102100-31-2P 110707-55-6P 110712-12-4P **110712-13-5P**
110726-19-7P

RL: PREP (Preparation)
(porous spheres manufacture of, by two-stage emulsion polymerization, for **coatings** with good hiding power and alkali resistance)

IT **110712-13-5P**
RL: PREP (Preparation)
(porous spheres manufacture of, by two-stage emulsion polymerization, for **coatings** with good hiding power and alkali resistance)

RN 110712-13-5 HCAPLUS

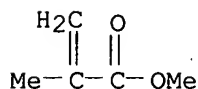
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with butyl 2-propenoate, 1,1-dimethylethyl 2-propenoate, ethenylbenzene, methyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate



CM 6

CRN 80-62-6

CMF C5 H8 O2



L26 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1987:103482 HCAPLUS

DN 106:103482

ED Entered STN: 05 Apr 1987

TI Photosensitive **compositions**

IN Fukutaka, Eitaro; Ogi, Hiroshi

PA Denki Kagaku Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L009-00

ICS C08F002-48; C08F299-00; G03C001-00; G03C001-71

CC 38-3 (**Plastics** Fabrication and Uses)

Section cross-reference(s): 74

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 61185542 | A2 | 19860819 | JP 1985-25727 | 19850213 |
| PRAI | JP 1985-25727 | | 19850213 | | |

AB Photosensitive compns., useful for inks, resists, **coatings**, and **adhesives** (no data), contain butadiene homo- or copolymers, OH-containing unsatd. esters, and PhCOC(OR)2R1 (R = C1-3 alkyl; R1 = Ph, C1-3 alkyl, C1- or NH2-substituted Ph). Thus, a mixture of vinyl-terminated oligobutadiene (mol. weight 2000) 200, 2-hydroxyethyl methacrylate 100, hydroquinone 0.25, tris(2-methoxyethyl)vinylsilane 3, and PhCOC(OMe)2Ph 3 g was transparent and odorless and had viscosity 450 P at 25°, a high curing rate, good adhesion to Fe and glass, and good **water** resistance.

ST photosensitive **compn** moisture resistance; polybutadiene photosensitive **compn**; hydroxyethyl methacrylate photosensitive **compn**; benzil **acetal** photosensitive **compn**; silane coupler photosensitive **compn**

IT Light-sensitive materials
(butadiene oligomers-alkyl methacrylates-benzil ketals, silane couplers for)

IT Coupling agents
(vinylalkoxysilanes, for photosensitive polymer compns.)

IT Rubber, butadiene, uses and miscellaneous
RL: USES (Uses)

(of 1,2-configuration, methacrylate-terminated, oligomeric TE-2000, photosensitive compns. containing, **adhesive** and **water**-resistant)

IT 1067-53-4

RL: USES (Uses)

(photosensitive compns. containing A-172, **adhesive** and moisture-resistant)

IT 97-90-5, Ethylene glycol dimethacrylate 868-77-9 923-26-2

24650-42-8, 2,2-Dimethoxy-2-phenylacetophenone

RL: USES (Uses)

(photosensitive compns. containing, **adhesive** and **water**-resistant)

IT 9003-17-2

RL: USES (Uses)

(rubber, of 1,2-configuration, methacrylate-terminated, oligomeric TE-2000, photosensitive compns. containing, **adhesive** and **water**-resistant)

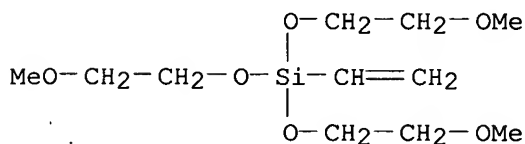
IT 1067-53-4

RL: USES (Uses)

(photosensitive compns. containing A-172, **adhesive** and moisture-resistant)

RN 1067-53-4 HCAPLUS

CN 2,5,7,10-Tetraoxa-6-silaundecane, 6-ethenyl-6-(2-methoxyethoxy)- (9CI)
(CA INDEX NAME)



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